SONY-04235

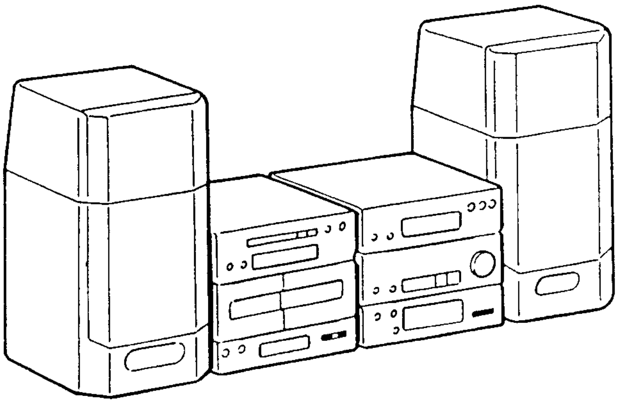
FH-E737CD/E838CD, MHC-2600/3600

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
MHC-2600/3600

E Model
Australian Model
FH-E737CD/E838CD

MHC-2600 inkl.LfdNr.:
4709+4205+4105+V13727



FH-E838CD, MHC-3600

SPECIFICATIONS

Power requirements
US, CND models : 120V AC, 60Hz
AEP, G, IT models :
220-230V AC, 50/60Hz
UK model : 240V AC, 50Hz
E, EA AUS models :
120V, 220V, or 240V AC
adjustable, 50/60Hz

Power consumption

	MHC-2600 FH-E737CD	MHC-3600 FH-E838CD
US model	100W	130W
CND AEP, G, IT, E, EA, AUS models	110W	140W
UK model	195W	310W

Dimensions
MHC-2600/FH-E737CD :
Approx. 225 × 365 × 275 mm
(w/h/d)
($8\,^7/_8 \times 14\,^3/_8 \times 10\,^7/_8$ inches)
MHC-3600/FH-E838CD :
Approx. 225 × 365 × 270 mm
(w/h/d)
($8\,^7/_8 \times 14\,^3/_8 \times 10\,^3/_4$ inches)
incl. projecting parts and controls

Weight
MHC-2600/FH-E737CD :
Approx. 9.6 kg (21 lb 3 oz)
MHC-3600/FH-E838CD :
Approx. 11.0 kg (24 lb 4 oz)

Design and specifications subject to change without notice.

MICROFILM

•FH-E737CD/E838CD and MHC-2600/3600 are composed of the following models. As for the service manual, it is issued for each component models, then please refer to it.

COMPONENT MODEL NAME FOR
FH-E737CD/E838CD and MHC-2600/3600

Component \ System	MHC-2600/FH-E737CD		MHC-3600/FH-E838CD	
	except US, Canadian models	US, Canadian models	US, Canadian models	except US, Cnadian models
Amplifier	TA-H2600		TA-H3600	
CD player	CDP-H3600			
Tuner	ST-H3600			
Cassette deck	TC-H2600	TC-H3600		
Speaker System	SS-H2600			SS-H3600

NOTE :
CND : Canadian model
G : Germany model
IT : Italian model
EA : Saudi Arabia model
AUS : Australian model

MINI HI-FI COMPONENT SYSTEM

SONY®

PARTS LIST

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ACCESSORY & PACKING MATERIALS

Ref. No.	Part No.	Description	Remarks
	1-465-703-11	REMOTE COMMANDER(RM-S360)(3600, E838CD)	
	1-463-704-11	REMOTE COMMANDER(RM-S260) (2600:AEP, UK, G, IT, E737CD)	
	1-465-705-11	REMOTE COMMANDER(RM-S355)(2600:US, CND)	
	1-501-369-11	ANTENNA(FM)(AEP, UK, G, IT)	
	1-501-374-11	ANTENNA, LOOP(AM)	
	1-501-224-00	ANTENNA, FEEDER(FM)(US, CND)	
	1-535-706-11	PLUG, JUMPER(H3600:E, EA)	
	⚠1-558-032-11	CORD, POWER(UK)	
	⚠1-575-131-11	CORD, POWER(AEP, G, IT, EA)	
	⚠1-575-706-11	CORD, POWER(US, CND)	
	⚠1-555-074-00	CORD, POWER(AUS)	
	⚠1-556-280-00	CORD, POWER(E)	
	⚠1-569-007-11	ADAPTER, CONVERSION 2P(E)	
	⚠1-569-008-11	ADAPTER, CONVERSION 2P(EA)	
	1-590-870-11	CORD(WITH CONNECTOR)17P(TA-TC-CD)	
	1-574-927-21	CORD(WITH CONNECTOR)15P(TA-ST)	
	1-590-855-11	CORD, SPEAKER(3600, E838CD)	
	1-557-954-21	CORD, SPEAKER(2600, E737CD)	
	3-753-175-11	MANUAL, INSTRUCTION(3600:AEP, UK, E838CD) (English, French, Spanish, Chinese)	
	3-753-175-21	MANUAL, INSTRUCTION(3600:US, CND) (English, French)	
	3-753-175-41	MANUAL, INSTRUCTION(3600:AEP, G, IT) (German, Dutch, Swedish, Italian, Portuguese)	
	3-753-277-11	MANUAL, INSTRUCTION(2600:AEP, UK, E737CD) (English, French, Spanish, Chinese)	
	3-753-277-21	MANUAL, INSTRUCTION(2600:US, CND) (English, French)	
	3-753-277-41	MANUAL, INSTRUCTION(2600:AEP, G, IT) (German, Dutch, Swedish, Italian, Portuguese)	
	3-707-584-01	COVER, BATTERY(for RM-S260, S355)	
	4-945-647-01	LID, SLIDE(for RM-S360)	
	4-945-648-01	CASE, BATTERY(for RM-S360)	
	* 4-945-070-01	INDIVIDUAL CARTON(TA, TC, ST, CDP)(2600:AEP, UK)	
	* 4-945-154-01	INDIVIDUAL CARTON(TA, TC, CDP)(2600:AEP, G, IT)	
	* 4-947-013-01	INDIVIDUAL CARTON(2600:US, CND)	
	* 4-945-151-01	INDIVIDUAL CARTON(TA, TC, ST, CDP)(3600:AEP, UK)	
	* 4-945-153-01	INDIVIDUAL CARTON(TA, TC, CDP)(3600:AEP, G, IT)	
	* 4-946-068-01	INDIVIDUAL CARTON(3600:US, CND)	
	* 4-945-727-01	INDIVIDUAL CARTON(E737CD:E, EA)	
	* 4-945-728-01	INDIVIDUAL CARTON(E737CD:AUS)	
	* 4-945-729-01	INDIVIDUAL CARTON(E838CD:E, EA)	
	* 4-945-730-01	INDIVIDUAL CARTON(E838CD:AUS)	

English
91E1695-1

9-956-470-11

Sony Corporation
Audio Group

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Published by Customer Relations and Service Group

TC-H2600/H3600

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
TC-H2600
TC-H3600

US Model
Canadian Model
TC-H3600

This set is a deck block of the following models.

MHC-2600 (TC-H2600 : AEP, UK/
TC-H3600 : US, Canadian),
FH-E737CD (TC-H2600 : E, Australian),
MHC-3600 (TC-H3600 : AEP, UK, US, Canadian),
FH-E838CD (TC-H3600 : E, Australian).

Model Name Using Similar Mecanism		TC-WR620/WR720
Tape Transport Mechanism Type	DECK A	TCM-190RA12A
	DECK B	TCM-190RB22A

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF) 40 — 13,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S) 40 — 14,000 Hz (±3 dB), using TYPE II cassette 40 — 15,000 Hz (±3 dB) using TYPE IV cassette
Wow and flutter	0.1% WRMS ±0.3% (DIN)
Inputs	PHONO (phono jacks): sensitivity 2.5 mV, impedance 47 kilohms DAT (phono jacks): sensitivity 450 mV, impedance 47 kiolhms VIDEO (phono jacks) (H3600 Model): sensitivity 300 mV, impedance 47 kilohms

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270℃ during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

STEREO CASSETTE DECK

SONY®

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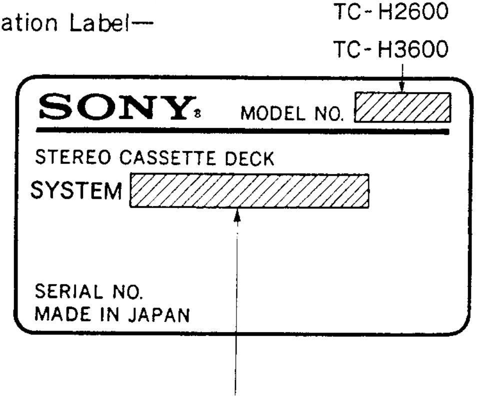
Caution when repairing

Normally the power of this set is supplied from the TA-H2600/H3600 amplifier connected. When only this set is repaired, connect the power of 18V AC as shown in the figure below.

MODEL IDENTIFICATION

—Specification Label—



TC-H2600
TC-H3600
SONY
MODEL NO.
STEREO CASSETTE DECK
SYSTEM
SERIAL NO.
MADE IN JAPAN

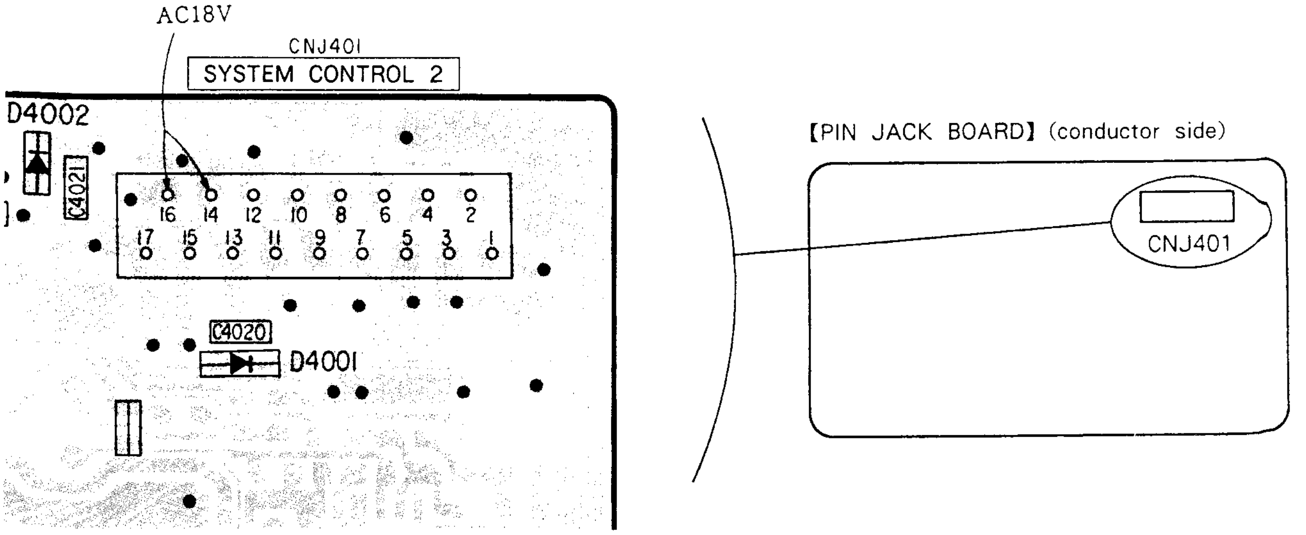
MHC-2600 (TC-H2600 : AEP, UK/
TC-H3600 : US, Canadian),
FH-E737CD (TC-H2600 : E, Australian),
MHC-3600 (TC-H3600 : AEP, UK, US, Canadian),
FH-E838CD (TC-H3600 : E, Australian).

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.



AC18V
CNJ401
SYSTEM CONTROL 2
D4002
C4021
16 14 12 10 8 6 4 2
17 15 13 11 9 7 5 3 1
C4020
D4001
[PIN JACK BOARD] (conductor side)
CNJ401

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

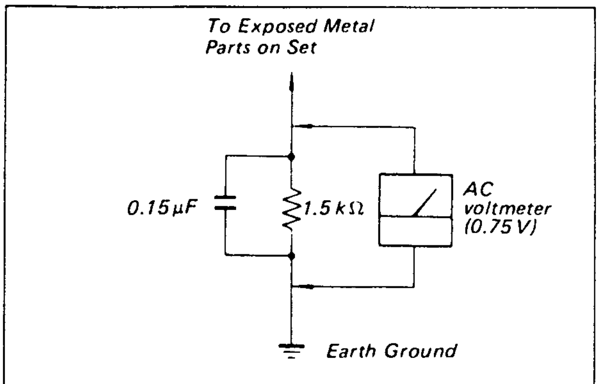
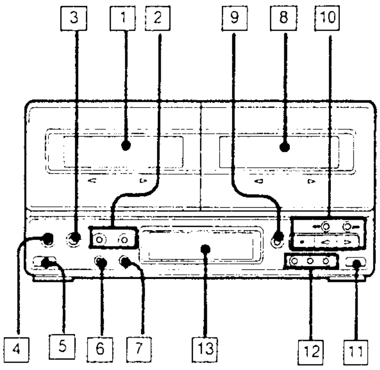


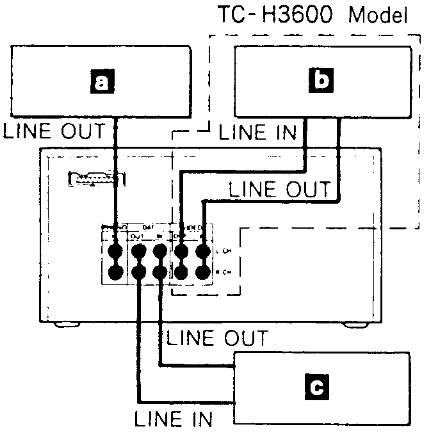
Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1
GENERAL

This section is extracted from instraction manual.



1. Cassette holder (Deck A)
2. DECK A/B selector (64)
3. CD SYNCHRO (CD synchronized recording) button and indicator (96) (102)
4. DUBBING MODE button and indicator (84)
5. ⏏ EJECT button (Deck A)
6. DOLBY NR (Dolby Noise Reduction) switch (66) (80)
7. DIRECTION MODE selector (64) (68)
8. Cassette holder (Deck B)
9. COUNTER RESET button
   Resets the counter of the cassette deck to "0".
10. Tape operation buttons (for Deck A and B)
    ◀◀ ▶▶ : Fast winding
    ■ : Stop
    ▷ : Forward play
    ◁ : Reverse play
11. ⏏ EJECT button (Deck B)
12. Tape operation buttons (for Deck B)
    II : PAUSE
    ○ : MUTE (Muting)
    ● : REC (recording)
13. Display window



You can connect a turntable system a to the PHONO jacks, a VCR b to the VIDEO jacks, and a DAT system c to the DAT jacks. To listen to each piece of equipment, press the FUNCTION buttons on the front panel until "PHONO" (for the turntable system), "VIDEO" (for VCR), or "DAT" appears on the display.

SECTION 2
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

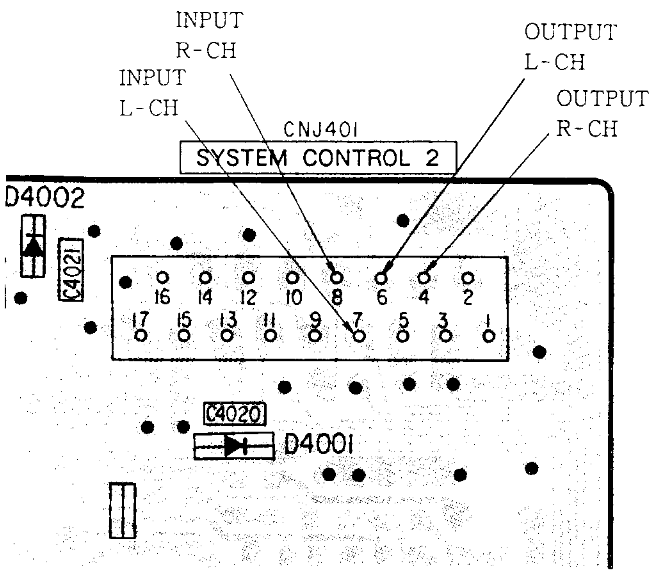
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	35 to 60g•cm (0.49 to 0.83 oz•inch)
Forward back tension	CQ-102C	2 to 6g • cm (0.03 to 0.08oz • inch)
Reverse	CQ-102RC	35 to 60g • cm (0.49 to 0.83oz • inch)
Reverse back tension	CQ-102RC	2 to 6g • cm (0.03 to 0.08oz • inch)
Forward, Reverse	CQ-201B	70 to 110g•cm (0.98 to 1.52 oz•inch)

LINE IN/OUT Terminal (CNJ401)



SECTION 3
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   - Switch position
     DOLBY NR switch : OFF
     DIR MODE switch : ⇄

Test Tape

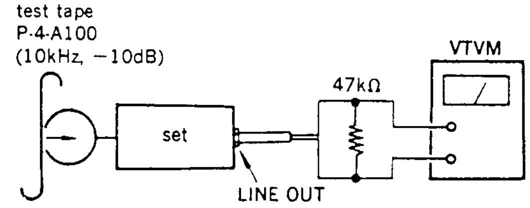
Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

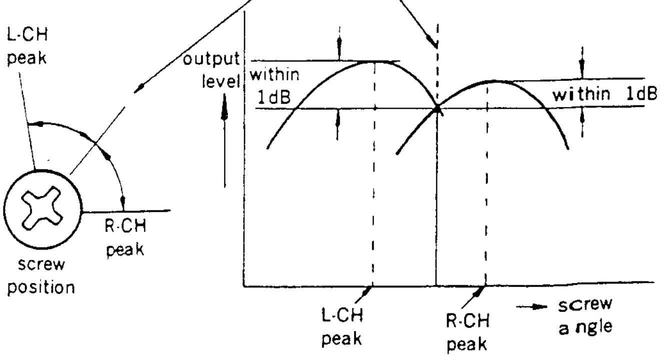
DECK A **DECK B**

Procedure:

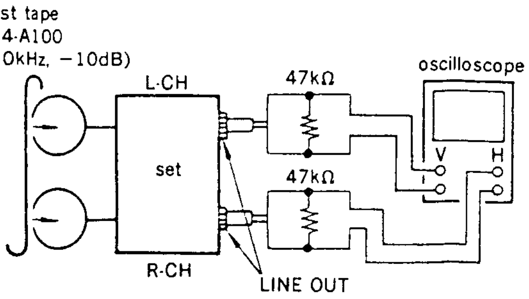
1. Forward Playback Mode

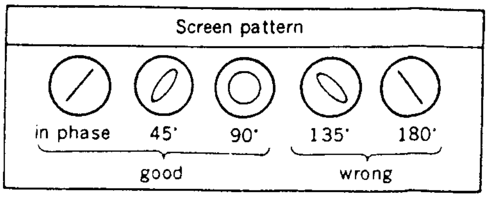


2. Turn the adjustment screw for the maximum output levels. If these levels do notmatch, turn the adjustment screw until both of output levels match together within 1dB.



3. Playback Mode

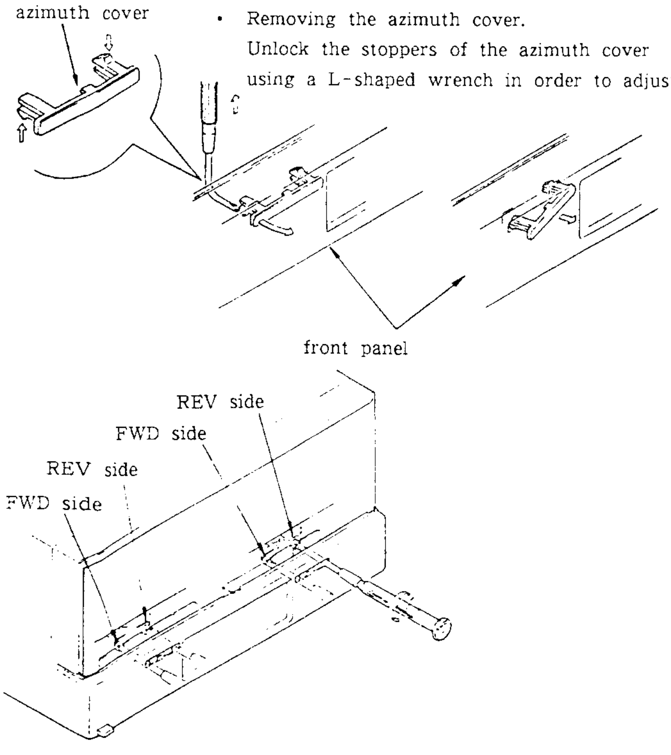

test tape
P-4-A100
(10kHz, −10dB)
L-CH
47kΩ
oscilloscope
set
47kΩ
V
H
R-CH
LINE OUT


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location : —record/playback head—

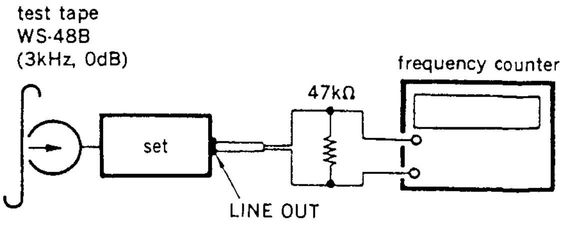
- Removing the azimuth cover.
  Unlock the stoppers of the azimuth cover using a L-shaped wrench in order to adjust.


azimuth cover
front panel
REV side
FWD side
REV side
FWD side

Tape Speed Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—


test tape
WS-48B
(3kHz, 0dB)
frequency counter
47kΩ
set
LINE OUT

Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

1. Short TP601 (main board) when the power is OFF.
2. Turn on the power and put the deck A into the FWD mode.
3. Connect a resistor of 150 Ω to both the terminals of TP6001 (main board). (The set enters into high speed playback mode.)
4. Adjust RV72A (H) of the deck A so that a reading of the frequency counter meets the adjustment value.
5. Put the deck A into the STOP mode and remove the resister of 150 Ω
6. Adjust the deck B performing items 2 through 5 as deck A.
7. After the adjustment is completed, remove the short of TP601.

(Normal speed adjustment)

1. Put the set into the FWD playback mode.
2. At this time, adjust RV71A (L) of the deck A and RV71B (L) of the deck B so that a reading of the frequency counter meets the adjustment value.

Adjustment Limits :

Speed	Frequency Counter Reading
High	6,000 ± 20Hz
Normal	3,000 ± 10Hz

Frequency difference between the beginning and the end of the tape should be within 3%.

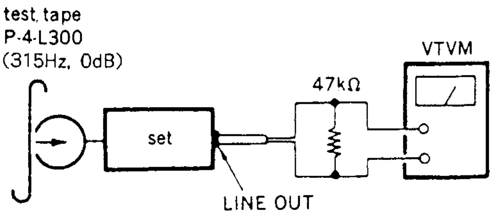
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

Adjustment Location : MD-A, B board

Playback Level Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—


test tape
P-4-L300
(315Hz, 0dB)
VTVM
47kΩ
set
LINE OUT

Adjust deck A : RV11A (L-CH), RV21A R-CH) and deck B : RV11B (L-CH), RV21B (R-CH) so that the VTVM reading becomes the adjustment limits below.

Adjustment Limits :

LINE OUT level : − 10 ± 0.5dB (0.23 to 0.26V)

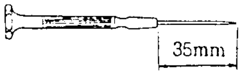
Level Difference between Channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

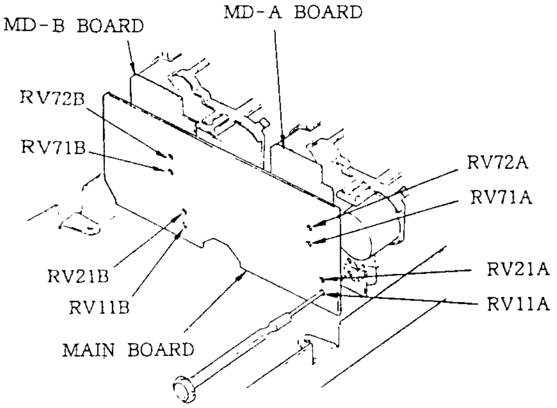
Adjustment Location : MD-A, B board

Tape Speed/playback Level Adjustment

Screwdriver to adjust the MD block



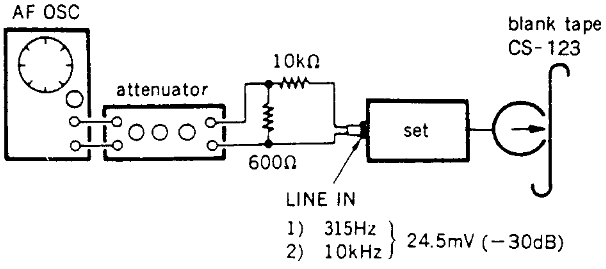
The MD block adjustment can be performed by inserting a screwdriver of which axis length (not including the shaft) is 35 mm or more through the rear side of the main board.


MD-B BOARD
MD-A BOARD
RV72B
RV71B
RV72A
RV71A
RV21B
RV11B
RV21A
RV11A
MAIN BOARD

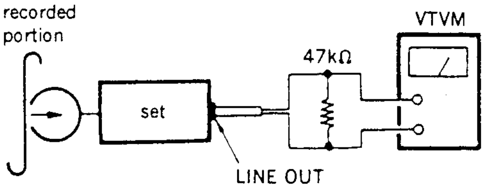
Record Bias Adjustment DECK B

Procedure :

1. Record Mode


AF OSC
blank tape
CS-123
10kΩ
attenuator
set
600Ω
LINE IN
1) 315Hz
2) 10kHz
24.5mV (−30dB)

2. Playback Mode


recorded
portion
VTVM
47kΩ
set
LINE OUT

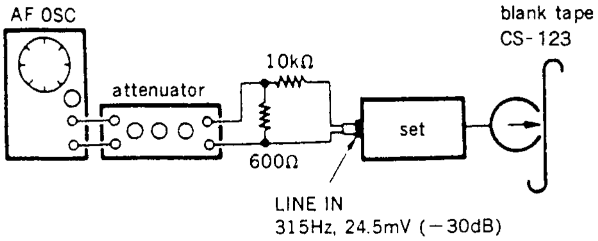
Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

Adjustment Location : MD-B board

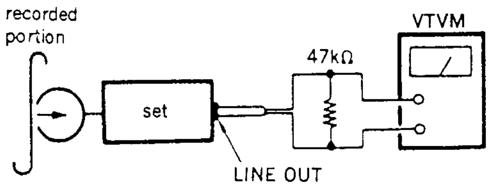
Record Level Adjustment **DECK B**

Procedure:

1. Record Mode


AF OSC
blank tape
CS-123
10kΩ
attenuator
set
600Ω
LINE IN
315Hz, 24.5mV (−30dB)

2. Playback Mode


recorded
portion
VTVM
47kΩ
set
LINE OUT

Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat steps 1 and 2.

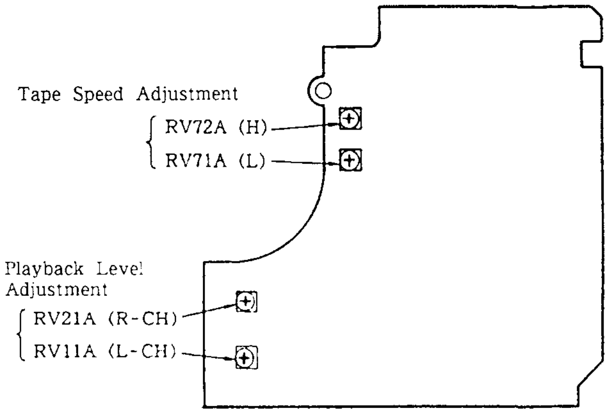
Adjustment Limits:

LINE OUT level: −30 ± 0.5dB (23 to 26mV)

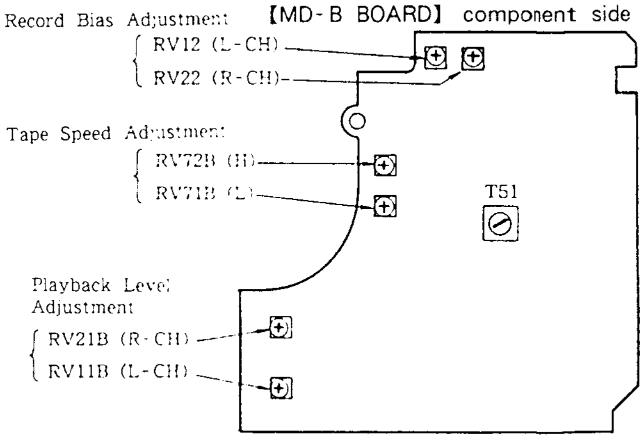
Adjustment Location: main board

ADJUSTMENT LOCATION:

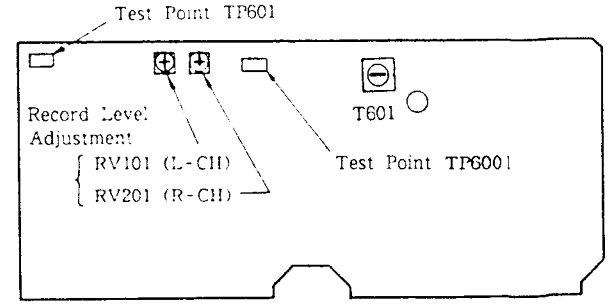
[MD-A BOARD] component side


Tape Speed Adjustment
RV72A (H)
RV71A (L)
Playback Level
Adjustment
RV21A (R-CH)
RV11A (L-CH)

[MD-B BOARD] component side


Record Bias Adjustment
RV12 (L-CH)
RV22 (R-CH)
Tape Speed Adjustment
RV72B (H)
RV71B (L)
T51
Playback Level
Adjustment
RV21B (R-CH)
RV11B (L-CH)

[MAIN BOARD] component side


Test Point TP601
Record Level
Adjustment
RV101 (L-CH)
RV201 (R-CH)
T601
Test Point TP6001

SECTION 4
DIAGRAMS

4-1. IC PIN DESCRIPTION

IC351 display microprocessor HD614022FP

Fluorescent lamp indicator is activated by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1~11	S10-S0	O	FL indicator tube(FL351) segment output
12			Not used. (+5.6 V)
13	VDISP	—	Power supply for activating the FL indicator tube(-20V)
14~15			Not used(GND)
16	SYNC	I	Interrupt input. Data transmission from IC601(system controller) is checked.
17	INT	I	Not used. (GND)
18~25		I	Not used. (GND)
26	Vcc	—	Power supply terminal (+5.6V)
27	CLK	I	Data transmission clock input from IC601 (system controller)
28	DATA	I	Serial data input from IC601 (system controller)
29	SYNC	I	Sync signal input which indicates the first byte of data sent from IC601 (system controller)
30~32			Not used. (GND)
33	HIGH DUB	O	LED (D301) light output in the high speed dubbing mode.
34	NORM DUB	O	LED (D301) light output in the normal speed dubbing mode.
35	CD SYNC	O	LED (D302) light output in the CD sync mode.
36~38			Not used. (GND)
39	FLCHECK	I	All the FL indicator tubes are lit when this port is set to "L". (Normally +5.6V)
40~42			Not used. (GND)
43	RESET	I	Reset input from IC601 (system controller). "L": Reset.
44	TEST	I	Not used. (+5.6V)
45	OSC1	I	Clock input (4.19MHz)
46	OSC2	O	Clock output
47	GND	—	Power supply terminal (GND)
48~50			Not used. (GND)
51			Not used. (Pull-up)
52~57	G0 - G6	O	FL indicator tube (FL351) grid output
58~61			Not used. (+5.6V)
62~64	S11 - S13	O	FL indicator tube (FL351) segment output

IC406 selector controller M50760-315FP

AV output is switched with the audio pass signal sent from the amplifier (TA-H2600/H3600).

Pin No.	Pin Name	I/O	Description
1	D3	I	Model secection input port. Connected to GND.
2	A0	O	Audio IN switch (IC403 and IC404) control output port.
3			Not used.
4	A1	O	Audio IN switch (IC403 and IC404) control output port.
5	CNVss	—	Power supply terminal (GND)
6	Vss	—	Power supply terminal (GND)
7	A2	O	Audio IN switch (IC403 and IC404) control output port.
8	B0	O	Audio OUT switch (IC405) control output port.
9	B1	O	Audio OUT switch (IC405) control output port.
10			Not used.
11	V0	O	Video IN/OUT switch (IC407) control output port.
12	V1	O	Video IN/OUT switch (IC407) control output port.
13~14			Not used. (GND)
15			Not used.
16	RESET	I	Reset input. "L": Reset
17	XOUT	O	Clock output.
18	XIN	I	Clock input.
19	S	I	Serial data input (audio pass)
20	D2	I	Serial data input (audio pass)
21	S1	I	Model secection input port. Connected to GND.
22			Not used.
23	VD0	I	Model secection input port. Connected to GND.
24	V_{DD}	—	Power supply terminal (+5V)

IC601 system controller M50944-121FP

The system is wholly controlled by communication between IC351 (display microprocessor) and IC602 (mechanism controller).

Pin No.	Pin Name	I/O	Description
1	KEY2	I	Not used. (GND)
2	KEY1	I	Not used. (GND)
3	SYNC	O	Sync signal input which indicates the first byte of data sent to IC351 (display microprocessor).
4	FL-SCK	O	Data transmission clock output to IC351 (display microprocessor).
5	FL-SO	O	Serial data output to IC351 (display microprocessor).
6	AU-BUS	O	Audio pass output.
7	AU-BUS	I	Audio pass input (negative edge).
8	POWER-IN	I	Power-off detection input. "L": Power OFF.
9	PB-SELECT	O	Deck A/B switch output in the playback mode. "L": deck B, "H": deck A.
10	AMS-SELECT	O	AMS amplifier input switch output
11	MD-REQ	I	Data request input from IC602 (mechanism controller)
12	MD-SCLK	O	Data transmission clock output to IC602 (mechanism controller)
13	MD-SO	O	Serial data output to IC602 (mechanism controller)
14	MD-SI	I	Serial data input from IC602 (mechanism controller)
15		O	Not used. (GND)
16	RESET (MD)	O	IC602 (mechanism controller) reset signal output.
17	AU-BUS	I	Audio pass input (positive-edge)
18	RESET (DSP)	O	IC351 (display microprocessor) reset signal output.
19	GND	—	Power supply terminal. (GND)
20	RESET	I	System reset input. "L": Reset.
21	X-IN	I	Clock input (4MHz)
22	X-OUT	O	Clock output
23	XC-IN	I	Not used. (GND)
24	XC-OUT	O	Not used. (open)
25	VSS	—	Power supply terminal (GND)
26	N. C.		Not used. (open)
27	TEST	I	Electrical adjustment test mode setting input This set enters into the test mode when the power is on and it is se to "L". *1
28	VAR SELECT	I	Not used. (pull-up)
29	METAL (B)	I	Metal switch (S83) input for deck B. "H": Metal.
30	70 μ (B)	I	Chrome switch (S82) input for deck B. "L": Normal
31	PPOWER-ON	O	Not used. (open)
32～35			Not used. (GND)
36	70 μ (A)	I	Chrome switch (S83) input for deck A. "L": Normal.
37	AMS IN	I	Signal input from the AMS amplifier. "H": Detected, "L": Not detected.
38	N. C.		Not used. (GND)
39			Not used. (GND)
40	EQ-HIGH	O	REC equalizer characteristic switch output "H": High speed, "L": Normal speed.
41	BIAS FADE	O	Not used. (GND)
42	BIAS (B)	O	Bias ON/OFF switch output. "H": OFF, "L": ON.
43	TYPE Ⅱ (B)	O	Not used. (GND)
44	TYPE Ⅰ (B)	O	Not used. (GND)
45	R.MUTE (B)	O	REC mute control output. "L": Mute ON, "H": Mute OFF.
46	RELAY (B)	O	Mechanism deck head switch control output. "L": ON.
47	DOLBY B	O	Dolby B/C switch control output. "L": Dolby C, "H": Dolby B.
48	DOLBY ON	O	Dolby ON/OFF switch control output. "L": ON, "H": OFF.
49	REC/PB	O	Dolby amplifier REC/PB swith output. "L": REC, "H": PB.
50		O	Not used. (open)
51	PB 70 μ	O	Playback equalizer characteristic switch output. "H": normal, "L": chrome metal
52	AMS/BS	O	Not used.
53	PASS	O	PASS amplifier switch output for LINE OUT. "L": PASS amplifier, "H": Through.

Pin No.	Pin Name	I/O	Description
54	LINE-MUTE	O	Line mute control output. "L": MUTE OFF, "H": MUTE ON
55	AVCC	—	Power supply terminal. (+5V)
56	VCC	—	Power supply terminal. (+5V)
57	AVSS	—	Power supply terminal (GND)
58	V.REF	I	Reference voltage input for A/D input port (+5 V)
59	METER (R)	I	Level meter signal output (R-CH)
60	METER (L)	I	Level meter signal input (L-CH)
61	VOL DATA	I	Not used. (GND)
62	KEY5	I	Not used. (GND)
63	KEY4	I	Key input. (analog) *2
64	KEY3	I	Key input. (analog) *2

*1 Test mode
When the power is on and pin ㉗ is set to "L" (TP601 is shortened.), the set enters the electrical adjustment test mode and the followings can be available.

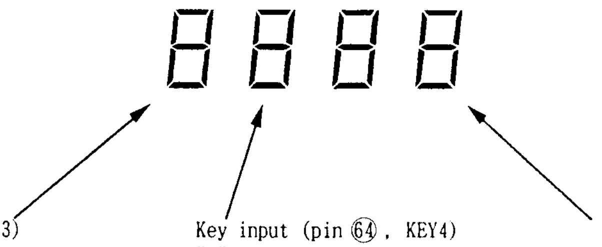
(1) High speed playback
When A or B deck is in the playback mode and a resistor of 150 Ω is connected to both the terminals of TP6001 (main board), the set can be entered the high speed playback mode.

(2) Source monitor
Recording signals can be monitored through the LINE OUT terminal (see page 4) because the line short is removed in recording.

(3) Recording memory
Recording memory is set to ON when the tape counter is reset at the record start point.

(4) Mode display
The counter displays as shown in the A figure when the counter mode is set to the deck A and the deck A button of deck A/B switch is pressed, or when the counter mode is the B deck and the B deck button is pressed.

(5) When this terminal is set back to "H" after it is set to the test mode in "L" of the power-on mode, all the FL indicator tubes are lit.
(The mechanism block continues to operate as before it is set to "H".)



Key input (pin ㊹, KEY3)
"0" : DUBBING MODE
"3" : □
"4" : ▷
"5" : ◁
"6" : ▯▯
"7" : REC MUTE
"8" : DIRECTION MODE

Key input (pin ㊹, KEY4)
"0" : CD SYNCHRO
"1" : ▷▷
"2" : ◁◁
"3" : ● REC
"4" : LEY COUNTER B
"5" : KEY COUNTER A
"6" : COUNTER RESET
"8" : DOLBY NR

AMS signal
"1": Component is detected.
"0": Component is not detected.

Figure A

*2 Key input (analog port)

Voltage(V) / Input port	0	0.3	0.7	1.2	1.7	2.3	2.8	3.3	4.0
Pin ㊸, KEY4	CD SYNCHRO	◁◁	▷▷	● REC	KEY COUNTER B	KEY COUNTER A	COUNTER RESET		DOLBY NR
Pin ㊹, KEY3	DUBBING MODE			□	▷	◁	▯▯ PAUSE	○ REC MUTE	DIRECTION MODE

IC602 mechanism controller M50925-482FP

The mechanism deck is controlled by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1	RESET	I	Reset input from IC601 (system controller). "L": Reset.
2	STOP-A	I	Deck A stop switch (S81) input. "H": Stop.
3	AVSS	—	Power supply terminal (GND)
4	Vref	I	A/D inpout port reference voltage input.
5	A/D. IN-B	I	Deck B leaf switch input (analog). *1
6	A/D. IN-A	I	Deck A leaf switch input (analog). *1
7	AVDD	—	Power supply terminal. (+5V)
8	N. C.		
9	T. REEL-B	I	Not used. (GND)
10	S. REEL-B	I	Deck B supply reel table sensor (IC81)
11	T. REEL-A	I	Not used. (GND)
12	S. REEL-A	I	Deck A supply reel table sensor (IC81)
13~14	N. C.		
15	CM. ON-A	O	Deck A capstan motor (M102) ON/OFF control output. "L": OFF, "H": ON.
16	CM. ON-B	O	Deck B capstan motor (M102) ON/OFF control output. "L": OFF, "H": ON.
17	GND	—	Power supply terminal. (GND)
18	VSS	—	Power supply terminal. (GND)
19	CM. H/L	O	Capstan motor (M102) speed switch output. "H": High speed, "L": Normal.
20	FWD-B	O	Deck B reel motor control output. *2 The reel motor is activated by combining these three outputs.
21	TRIG-B	O	
22	FWD-B	O	
23	RWD-A	O	Deck A reel motor control output. *2 The reel motor is activated by combining these three outputs.
24	TRIG-A	O	
25	FWD-A	O	
26	N. C.		
27	S. REQ	O	Data request output to IC601 (system controller).
28	S. CLK	I	Data transmission clock input from IC601 (system controller).
29	S. OUT	O	Serial data output to IC601 (system controller).
30	S.IN	I	Serial data input from IC601 (system controller).
31~32	N. C.		
33	XOUT	O	Clock output.
34	XIN	I	Clock input.
35	STOP-B	I	Deck B stop switch (S81) input. "H": Stop.
36	VDD	—	Power supply terminal. (+5V)

*1 HALF, REC safety tab leaf switch input

Leaf switch \ Voltage		1	1.9	2.8	3.9	5
Half	S86	ON				OFF
REC safety tab, side A	S84	OFF	ON	OFF	ON	OFF
REC safety tab, side B	S85	ON	ON	OFF	OFF	OFF
		REC availablefor only side B.	REC availablefor both sides	REC inhibit for both sides A and B.	REC availablefor only side A.	Tape is not set.

Tape is set.

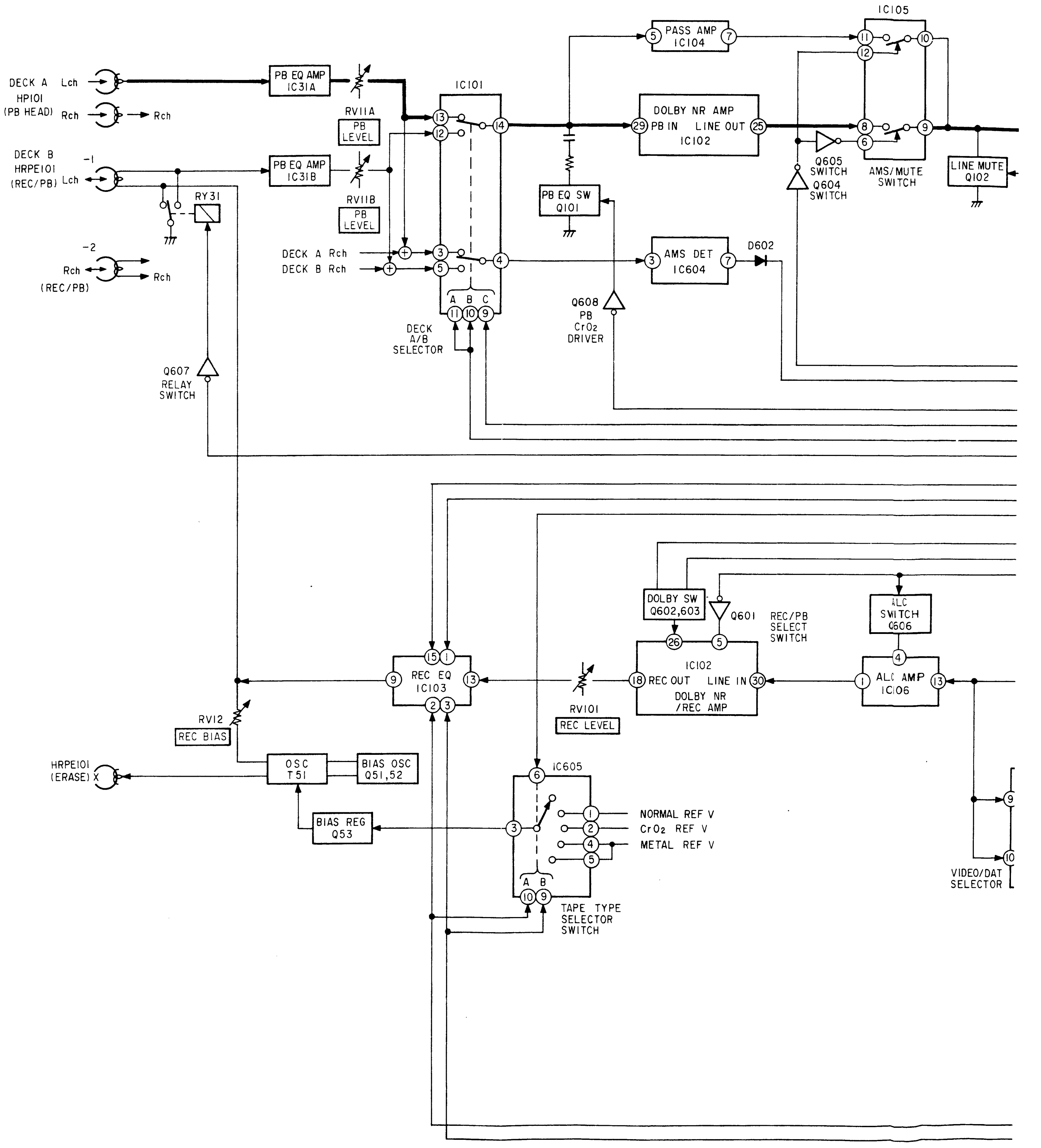
*2 Reel motor drive

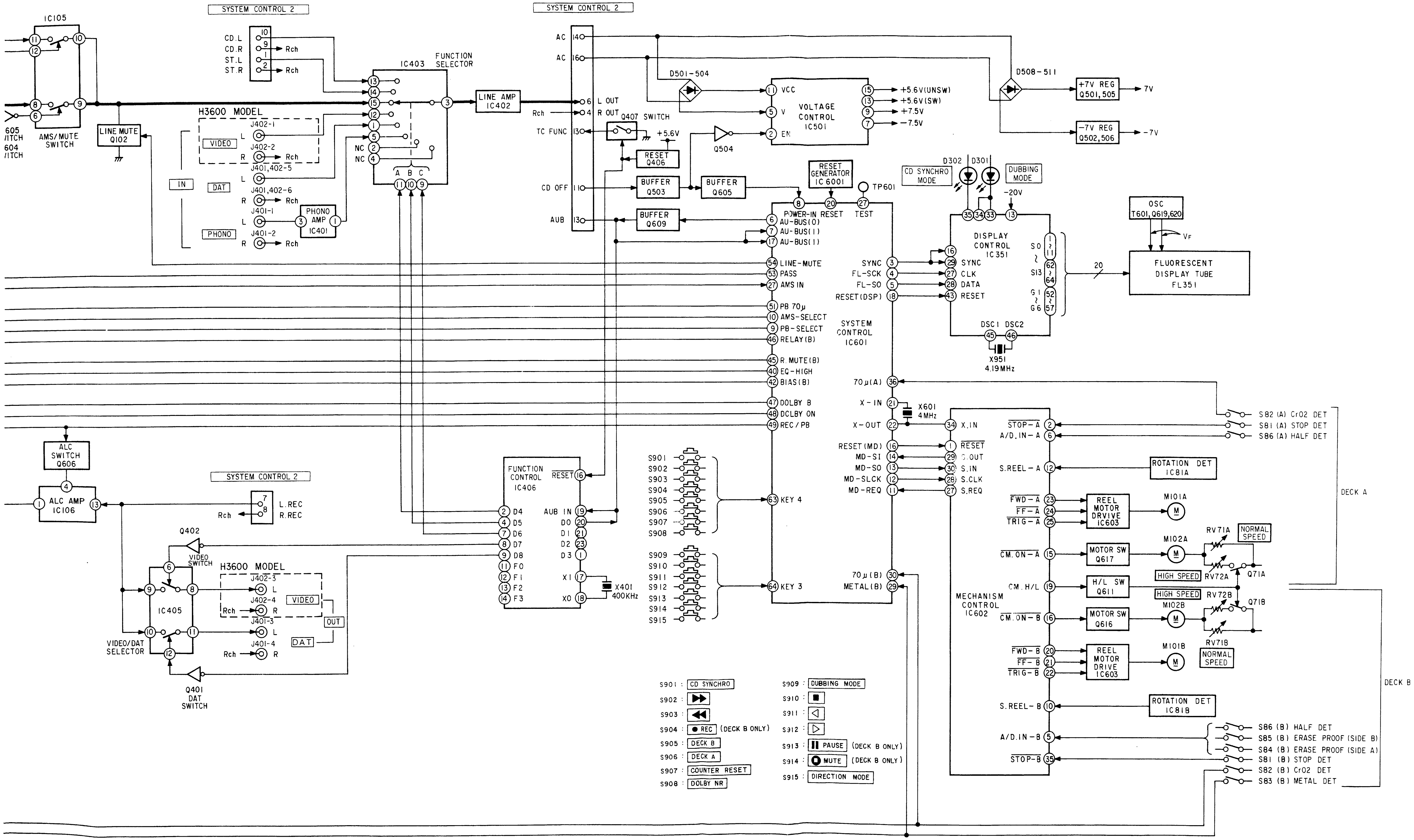
Output port \ Mode		FF	TRIG (kick)	STOP	FWO
Pins ㉑and㉔	FF	L	H	L	L
Pins ㉒and㉕	TRIG	H	L	L	H
Pins ⑳and㉓	FWD	H	H	L	L

Reel motor drive amplifier output voltage

Output	Voltage
TRIG	+ 6V
FF. REW	− 5V
FWD	− 3V

4-2. BLOCK DIAGRAM

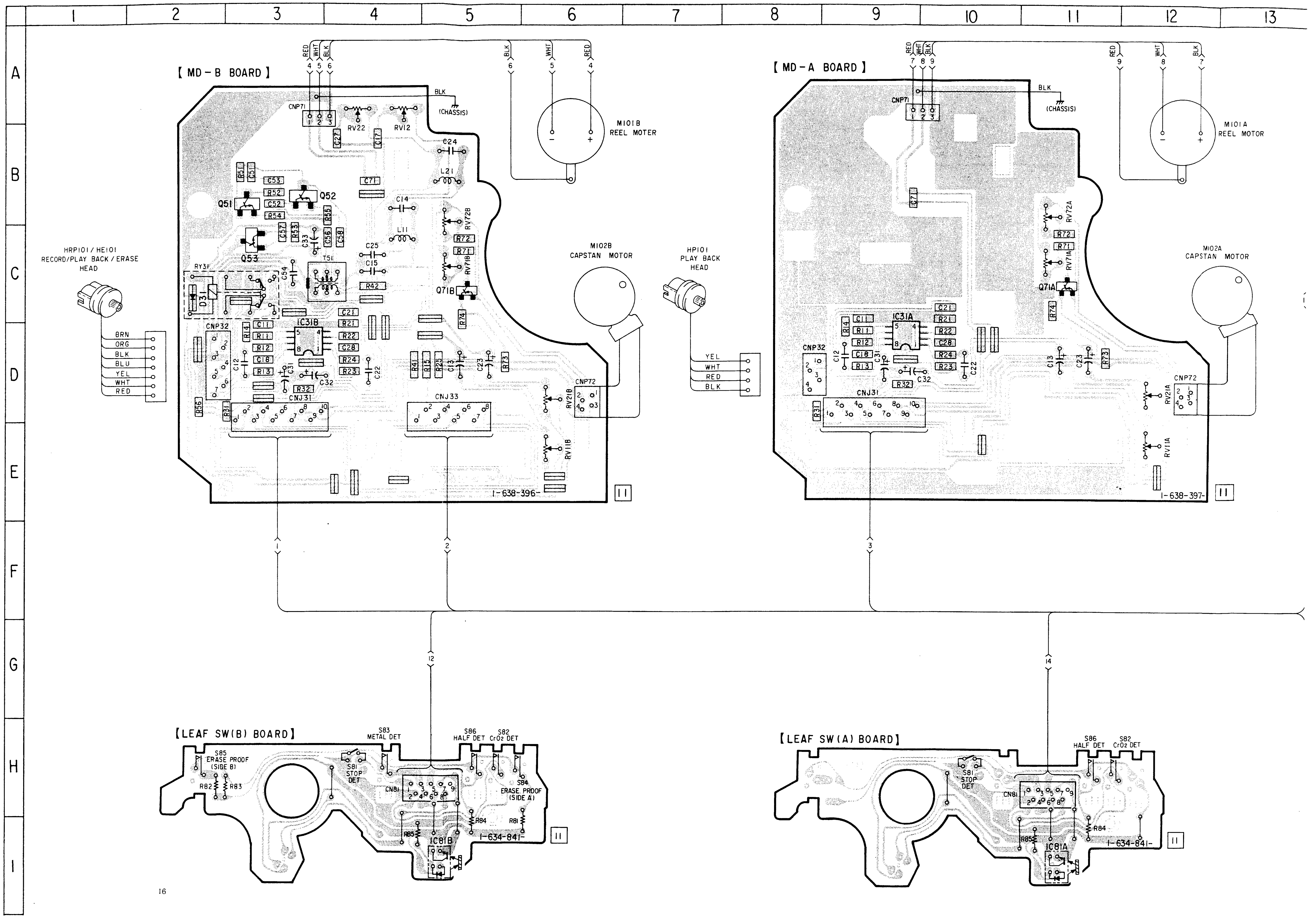

DECK A Lch
HP101 (PB HEAD) Rch
Rch
DECK B HRPE101 (REC/PB) -1 Lch
-2 Rch (REC/PB)
Rch
RY31
Q607 RELAY SWITCH
PB EQ AMP IC31A
PB EQ AMP IC31B
RV11A PB LEVEL
RV11B PB LEVEL
DECK A Rch
DECK B Rch
IC101
DECK A/B SELECTOR
A B C
PB EQ SW Q101
Q608 PB CrO2 DRIVER
PASS AMP IC104
DOLBY NR AMP PB IN LINE OUT IC102
AMS DET IC604
D602
IC105
Q605 SWITCH
Q604 SWITCH
AMS/MUTE SWITCH
LINE MUTE Q102
REC EQ IC103
RV12 REC BIAS
HRPE101 (ERASE)
OSC T51
BIAS OSC Q51,52
BIAS REG Q53
RV101 REC LEVEL
DOLBY SW Q602,603
Q601 REC/PB SELECT SWITCH
IC102 REC OUT LINE IN DOLBY NR /REC AMP
ALC SWITCH Q606
ALC AMP IC106
IC605
NORMAL REF V
CrO2 REF V
METAL REF V
TAPE TYPE SELECTOR SWITCH
VIDEO/DAT SELECTOR


SYSTEM CONTROL 2
IC105
AMS/MUTE SWITCH
LINE MUTE Q102
CD.L
CD.R
ST.L
ST.R
Rch
IC403 FUNCTION SELECTOR
H3600 MODEL
J402-1
VIDEO
J402-2
J401,402-5
IN
DAT
J401,402-6
PHONO AMP IC401
J401-1
PHONO
J401-2
NC
A B C
LINE AMP IC402
AC
L OUT
R OUT
Q407 SWITCH
TC FUNC
+5.6V
RESET Q406
CD OFF
BUFFER Q503
BUFFER Q605
AUB
BUFFER Q609
Q504
D501-504
VCC
VOLTAGE CONTROL IC501
EN
+5.6V(UNSW)
+5.6V(SW)
+7.5V
−7.5V
D508-511
+7V REG Q501,505
7V
−7V REG Q502,506
−7V
RESET GENERATOR IC6001
TP601
POWER-IN RESET
TEST
AU-BUS(0)
AU-BUS(1)
AU-BUS(1)
LINE-MUTE
PASS
AMS IN
PB 70μ
AMS-SELECT
PB-SELECT
RELAY(B)
R.MUTE(B)
EQ-HIGH
BIAS(B)
DOLBY B
DOLBY ON
REC/PB
SYSTEM CONTROL IC601
SYNC
FL-SCK
FL-SO
RESET(DSP)
70μ(A)
X-IN
X601 4MHz
X-OUT
RESET(MD)
MD-SI
MD-SO
MD-SLCK
MD-REQ
KEY 4
KEY 3
70μ(B)
METAL(B)
CD SYNCHRO MODE
D302
D301
DUBBING MODE
−20V
DISPLAY CONTROL IC351
SYNC
CLK
DATA
RESET
S0 ~ S11
S13 ~ S64
G1 ~ G6
DSC1 DSC2
X951 4.19MHz
OSC T601,Q619,620
VF
20
FLUORESCENT DISPLAY TUBE FL351
X.IN
RESET
S.OUT
S.IN
S.CLK
S.REQ
MECHANISM CONTROL IC602
STOP-A
A/D.IN-A
S82 (A) CrO2 DET
S81 (A) STOP DET
S86 (A) HALF DET
S.REEL-A
ROTATION DET IC81A
DECK A
FWD-A
FF-A
TRIG-A
REEL MOTOR DRIVE IC603
M101A
CM.ON-A
MOTOR SW Q617
M102A
RV71A
NORMAL SPEED
Q71A
CM.H/L
H/L SW Q611
HIGH SPEED
RV72A
HIGH SPEED
RV72B
M102B
Q71B
CM.ON-B
MOTOR SW Q616
FWD-B
FF-B
TRIG-B
REEL MOTOR DRIVE IC603
M101B
RV71B
NORMAL SPEED
DECK B
S.REEL-B
ROTATION DET IC81B
A/D.IN-B
STOP-B
S86 (B) HALF DET
S85 (B) ERASE PROOF (SIDE B)
S84 (B) ERASE PROOF (SIDE A)
S81 (B) STOP DET
S82 (B) CrO2 DET
S83 (B) METAL DET
ALC SWITCH Q606
ALC AMP IC106
L.REC
R.REC
Q402
VIDEO SWITCH
H3600 MODEL
J402-3
J402-4
VIDEO
J401-3
OUT
DAT
J401-4
IC405
VIDEO/DAT SELECTOR
Q401 DAT SWITCH
FUNCTION CONTROL IC406
RESET
D4 D5 D6 D7 D8
F0 F1 F2 F3
AUB IN
D0 D1 D2 D3
X1 X0
X401 400KHz
S901 ~ S915
S901 : CD SYNCHRO
S902 : ▶▶
S903 : ◀◀
S904 : ● REC (DECK B ONLY)
S905 : DECK B
S906 : DECK A
S907 : COUNTER RESET
S908 : DOLBY NR
S909 : DUBBING MODE
S910 : ■
S911 : ◁
S912 : ▷
S913 : ‖ PAUSE (DECK B ONLY)
S914 : ● MUTE (DECK B ONLY)
S915 : DIRECTION MODE
605 SWITCH
604 SWITCH

4-3. PRINTED WIRING BOARDS – MAIN SECTION – • See page 32 for Semiconductor Lead Layouts and Curcuit Boards Location.

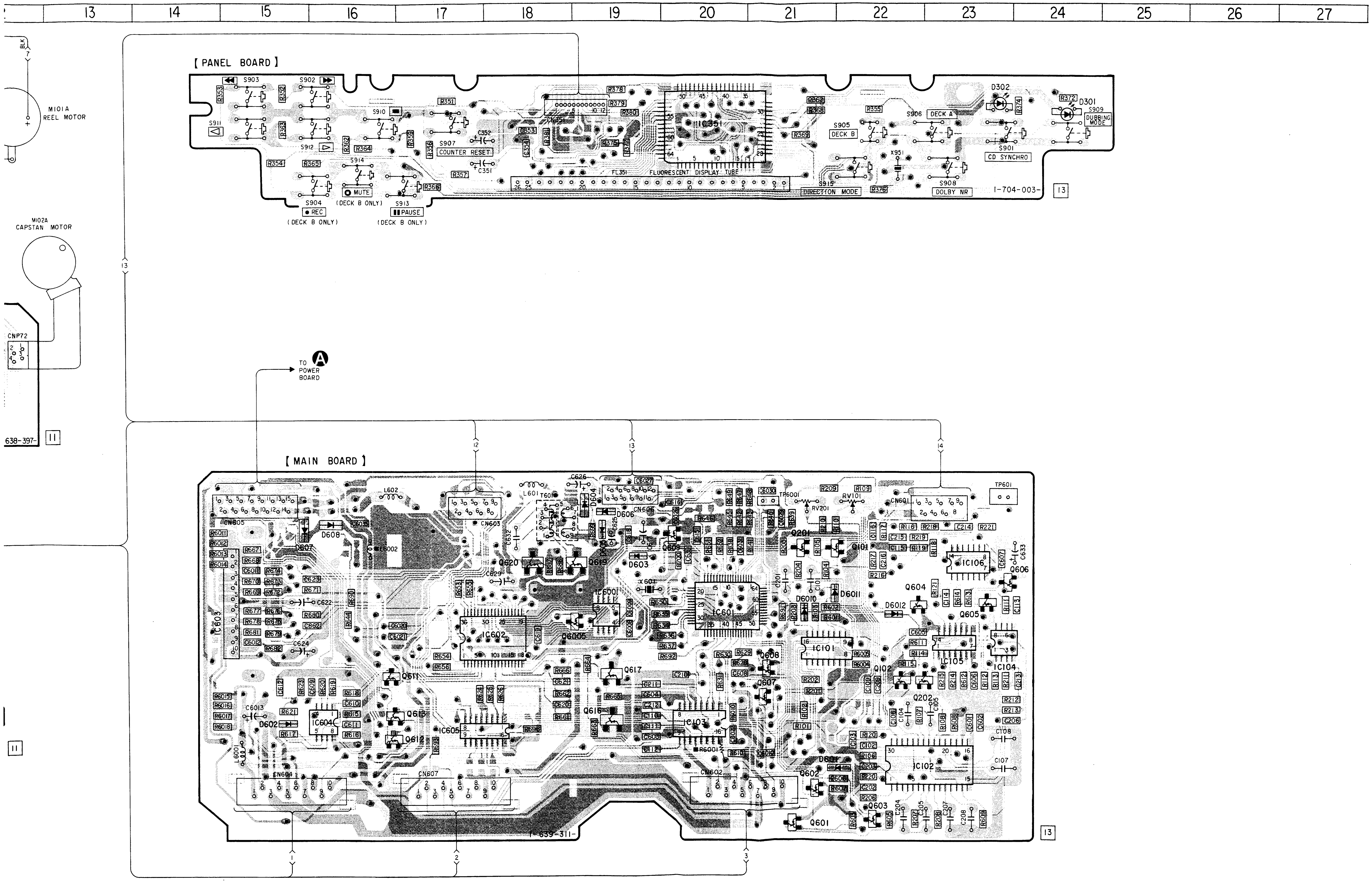
- Semiconductor Location

Ref. No.	Location
D31	C-2
D301	B-24
D302	A-23
D601	I-21
D602	I-15
D603	G-19
D604	F-19
D605	F-19
D606	F-19
D607	F-15
D608	F-16
D6010	G-21
D6011	G-21
D6012	G-22
IC31-A	D-9
IC31-B	D-3
IC81-A	I-11
IC81-B	I-5
IC101	H-21
IC102	I-23
IC103	I-20
IC104	H-23
IC105	H-23
IC106	G-23
IC351	B-20
IC601	G-20
IC602	H-18
IC603	G-15
IC604	I-16
IC605	I-17
IC6001	G-19
Q51	B-3
Q52	B-3
Q53	C-3
Q71-A	C-11
Q71-B	C-5
Q101	G-21
Q102	H-22
Q201	G-21
Q202	H-22
Q601	J-21
Q602	I-21
Q603	J-22
Q604	G-22
Q605	G-23
Q606	G-23
Q607	H-21
Q608	H-21
Q609	F-20
Q611	H-16
Q612	I-16
Q613	H-16
Q616	I-19
Q617	H-19
Q619	G-19
Q620	G-18
Q6005	G-19


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
[MD-B BOARD]
RED
WHT
BLK
BLK
(CHASSIS)
M101B
REEL MOTER
CNP71
RV22
RV12
C24
L21
C14
L11
Q51
Q52
Q53
C25
C15
T51
R42
RV72B
RV71B
Q71B
R72
R71
R74
RY31
D31
IC31B
CNP32
CNJ31
CNJ33
CNP72
RV21B
RV11B
C32
C22
C13
C23
R73
1-638-396-
11
HRP101 / HE101
RECORD/PLAY BACK / ERASE
HEAD
BRN
ORG
BLK
BLU
YEL
WHT
RED
M102B
CAPSTAN MOTOR
HP101
PLAY BACK
HEAD
YEL
WHT
RED
BLK
[MD-A BOARD]
M101A
REEL MOTOR
RV72A
RV71A
Q71A
IC31A
M102A
CAPSTAN MOTOR
RV21A
RV11A
1-638-397-
[LEAF SW(B) BOARD]
S83
METAL DET
S86
HALF DET
S82
CrO2 DET
S85
ERASE PROOF
(SIDE B)
R82
R83
S81
STOP
DET
CNB1
S84
ERASE PROOF
(SIDE A)
R84
R81
R85
IC81B
1-634-841-
[LEAF SW(A) BOARD]
IC81A
16

Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

13
14
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16
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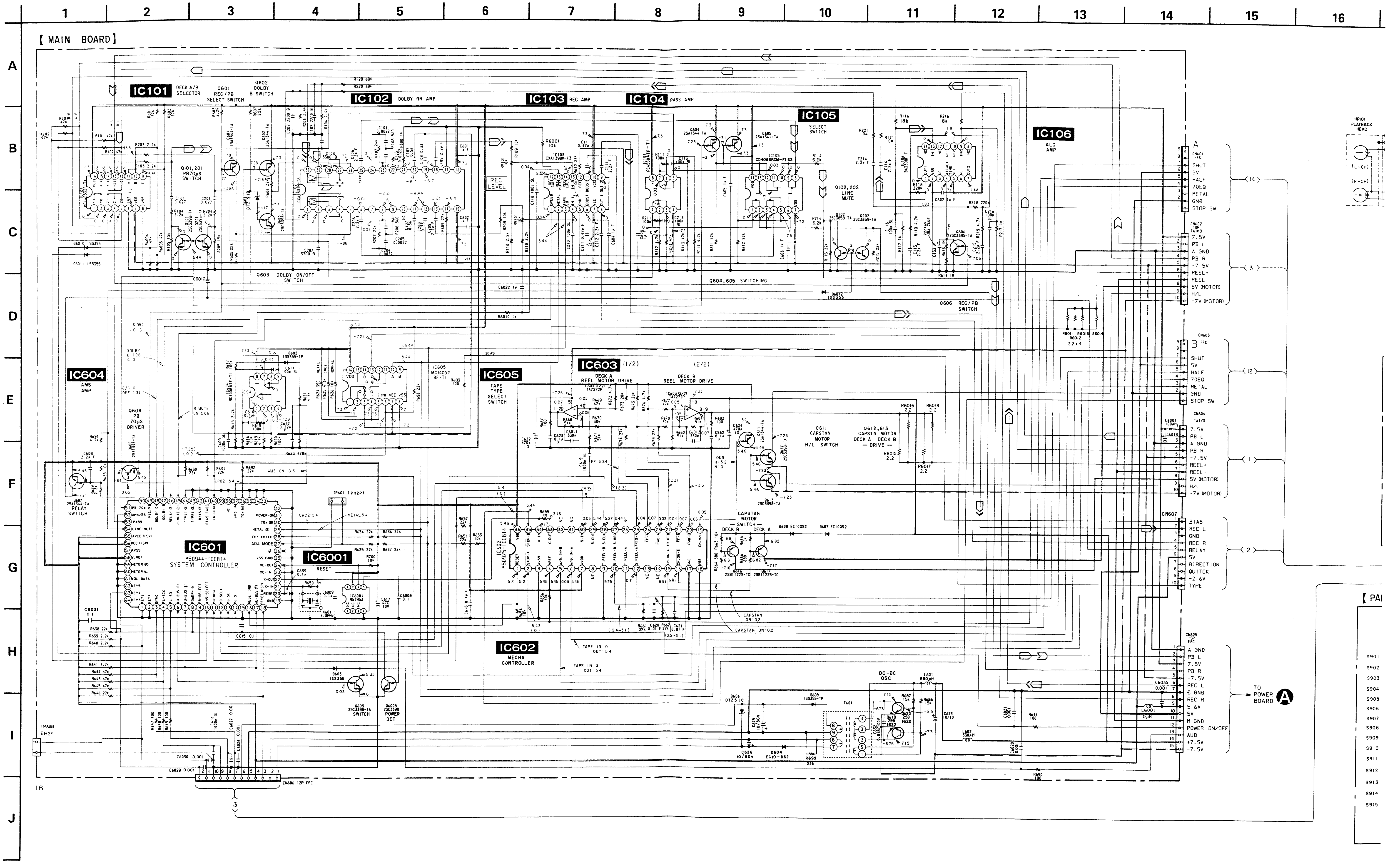
24
25
26
27
[PANEL BOARD]
M101A
REEL MOTOR
M102A
CAPSTAN MOTOR
CNP72
S903
S902
S910
S911
S912
S907
COUNTER RESET
S914
S904
● REC
(DECK B ONLY)
○ MUTE
(DECK B ONLY)
S913
II PAUSE
(DECK B ONLY)
IC351
FL351
FLUORESCENT DISPLAY TUBE
S905
DECK B
S906
DECK A
D302
D301
S909
DUBBING MODE
S901
CD SYNCHRO
X951
S915
DIRECTION MODE
S908
DOLBY NR
1-704-003-
13
TO
A
POWER
BOARD
638-397-
11
[MAIN BOARD]
CN605
CN603
CN606
CN601
TP601
IC6001
IC601
IC602
IC101
IC106
IC105
IC104
IC604
IC605
IC103
IC102
CN604
CN607
CN602
Q620
Q619
Q6005
Q617
Q616
Q611
Q613
Q612
Q201
Q101
Q604
Q605
Q606
Q608
Q607
Q102
Q202
Q602
Q603
Q601
D608
D607
D606
D604
D603
D602
D6010
D6011
D6012
D601
L601
L602
L6001
T601
X601
RV201
RV101
TP6001
1-639-311-
13
12
14
1
2
3

4-4. SCHEMATIC DIAGRAM – MAIN SECTION – • See page 24 for Note in Schematic Diagram.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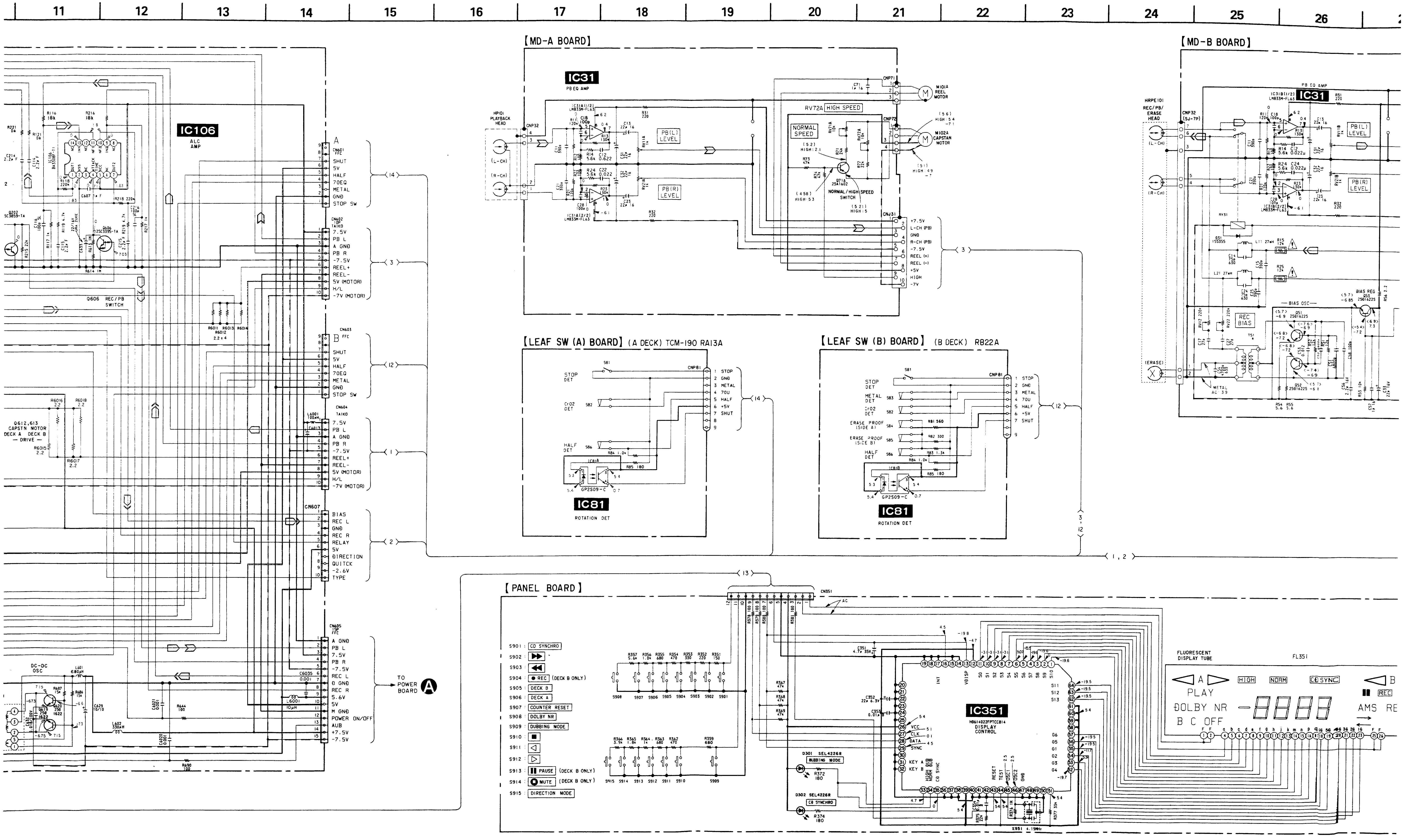
A
B
C
D
E
F
G
H
I
J
[MAIN BOARD]
IC101
DECK A/B SELECTOR
Q601 REC/PB SELECT SWITCH
Q602 DOLBY B SWITCH
IC102
DOLBY NR AMP
IC103
REC AMP
IC104
PASS AMP
IC105
SELECT SWITCH
IC106
ALC AMP
Q101,201 PB70μS SWITCH
REC LEVEL
Q102,202 LINE MUTE
Q603 DOLBY ON/OFF SWITCH
Q604,605 SWITCHING
Q606 REC/PB SWITCH
IC604
AMS AMP
Q608 PB 70μS DRIVER
Q607 2SA1344-TA RELAY SWITCH
IC605
TAPE TYPE SELECT SWITCH
IC603 (1/2)
(2/2)
DECK A REEL MOTOR DRIVE
DECK B REEL MOTOR DRIVE
Q611 CAPSTAN MOTOR H/L SWITCH
Q612,613 CAPSTN MOTOR DECK A DECK B – DRIVE –
CAPSTAN MOTOR – SWITCH –
DECK B
DECK A
IC601
M50944-TCC814 SYSTEM CONTROLLER
IC6001
RESET
IC602
MECHA CONTROLLER
TP601 (PH2P)
TP6001 EH2P
Q603 1SS355
Q609 2SC3398-TA SWITCH
Q6005 2SC3398 POWER DET
DC-DC OSC
T601
CN606 12P FFC
HP101 PLAYBACK HEAD
(L-CH)
(R-CH)
CN601 FFC
A
SHUT
5V
HALF
70EQ
METAL
GND
STOP SW
CN602 10P TAIKO
7.5V
PB L
A GND
PB R
-7.5V
REEL+
REEL-
5V (MOTOR)
H/L
-7V (MOTOR)
CN603 FFC
B
CN604 TAIKO
CN607
BIAS
REC L
GND
REC R
RELAY
5V
DIRECTION
QUICK
-2.6V
TYPE
CN605 15P FFC
A GND
PB L
7.5V
PB R
-7.5V
REC L
B GND
REC R
5.6V
5V
M GND
POWER ON/OFF
AUB
+7.5V
-7.5V
TO POWER BOARD A
[PA
S901
S902
S903
S904
S905
S906
S907
S908
S909
S910
S911
S912
S913
S914
S915


11
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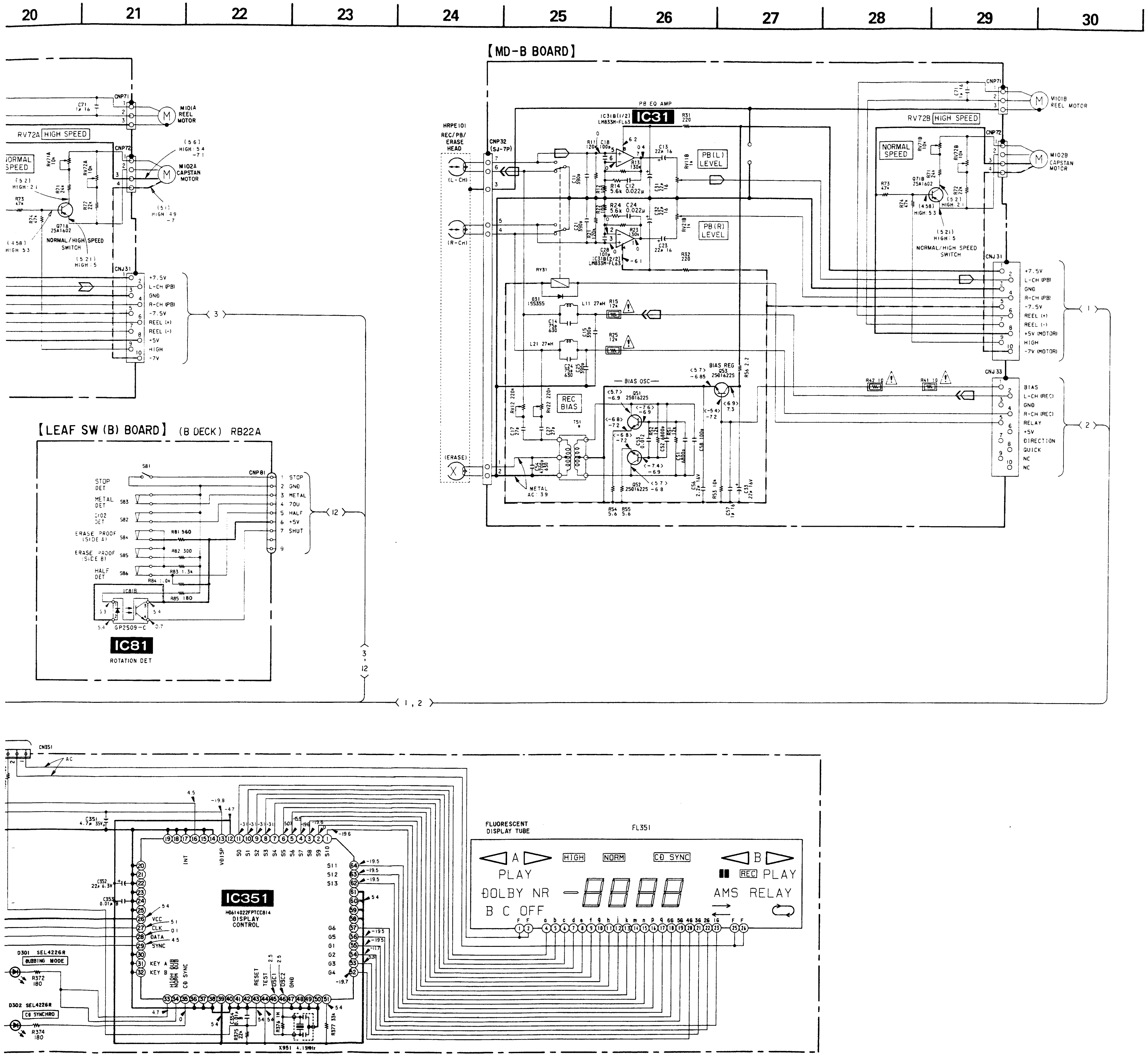
23
24
25
26
IC106
ALC AMP
CN601 FFC
SHUT
5V
HALF
70EQ
METAL
GND
STOP SW
CN602 10P TAIKO
7.5V
PB L
A GND
PB R
-7.5V
REEL+
REEL-
5V (MOTOR)
H/L
-7V (MOTOR)
Q606 REC/PB SWITCH
CN603 FFC
CN604 TAIKO
Q612,613 CAPSTN MOTOR DECK A DECK B - DRIVE -
CN607
BIAS
REC L
GND
REC R
RELAY
5V
DIRECTION
QUITCK
-2.6V
TYPE
CN605 15P FFC
A GND
PB L
7.5V
PB R
-7.5V
REC L
D GND
REC R
5.6V
5V
M GND
POWER ON/OFF
AUB
+7.5V
-7.5V
TO POWER BOARD A
DC-DC OSC
【MD-A BOARD】
IC31
PB EQ AMP
HP101 PLAYBACK HEAD
(L-CH)
(R-CH)
CNP32
PB(L) LEVEL
PB(R) LEVEL
CNP71
M101A REEL MOTOR
RV72A HIGH SPEED
NORMAL SPEED
CNP72
M102A CAPSTAN MOTOR
Q71A 2SA1602
NORMAL/HIGH SPEED SWITCH
CNJ31
+7.5V
L-CH (PB)
GND
R-CH (PB)
-7.5V
REEL (+)
REEL (-)
+5V
HIGH
-7V
【LEAF SW (A) BOARD】 (A DECK) TCM-190 RA13A
STOP DET
CrO2 DET
HALF DET
CNP81
STOP
GND
METAL
70U
HALF
+5V
SHUT
IC81
ROTATION DET
GP2S09-C
【LEAF SW (B) BOARD】 (B DECK) R822A
METAL DET
ERASE PROOF (SIDE A)
ERASE PROOF (SIDE B)
【MD-B BOARD】
HRPE101 REC/PB/ERASE HEAD
IC31(1/2) LM833M-FL63
PB EQ AMP
(ERASE)
REC BIAS
BIAS OSC
BIAS REG
【PANEL BOARD】
CN351
S901 CD SYNCHRO
S902
S903
S904 REC (DECK B ONLY)
S905 DECK B
S906 DECK A
S907 COUNTER RESET
S908 DOLBY NR
S909 DUBBING MODE
S910
S911
S912
S913 PAUSE (DECK B ONLY)
S914 MUTE (DECK B ONLY)
S915 DIRECTION MODE
D301 SEL4226R DUBBING MODE
D302 SEL4226R CD SYNCHRO
IC351
HD614022FPTCC814 DISPLAY CONTROL
X951 4.19MHz
FLUORESCENT DISPLAY TUBE
FL351
A
B
PLAY
HIGH
NORM
CD SYNC
REC
DOLBY NR
AMS
B C OFF


20
21
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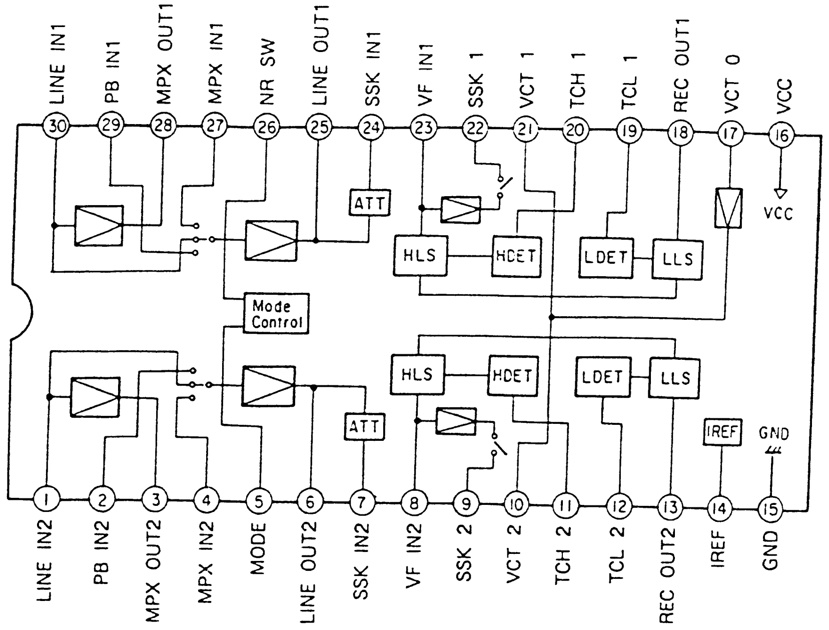
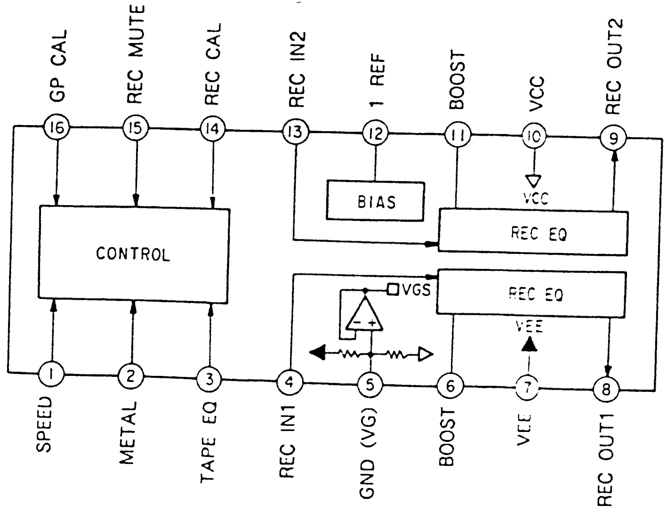
28
29
30
【MD-B BOARD】
PB EQ AMP
IC31
IC31(1/2) LM833M-FL63
IC31(2/2) LM833M-FL63
PB(L) LEVEL
PB(R) LEVEL
HRPE101 REC/PB/ERASE HEAD
CNP32 (SJ-7P)
(L-CH)
(R-CH)
(ERASE)
CNP71
CNP72
M101B REEL MOTOR
M102B CAPSTAN MOTOR
RV72B HIGH SPEED
NORMAL SPEED
NORMAL/HIGH SPEED SWITCH
M101A REEL MOTOR
M102A CAPSTAN MOTOR
RV72A HIGH SPEED
NORMAL SPEED
CNJ31
+7.5V
L-CH (PB)
GND
R-CH (PB)
-7.5V
REEL (+)
REEL (-)
+5V (MOTOR)
HIGH
-7V (MOTOR)
CNJ33
BIAS
L-CH (REC)
GND
R-CH (REC)
RELAY
+5V
DIRECTION
QUICK
NC
NC
RY31
BIAS OSC
BIAS REG
REC BIAS
METAL AC 3.9
Q51 2SD1622S
Q52 2SD1622S
Q53 2SD1622S
【LEAF SW (B) BOARD】 (B DECK) RB22A
STOP DET
METAL DET
CrO2 DET
ERASE PROOF (SIDE A)
ERASE PROOF (SIDE B)
HALF DET
CNP81
STOP
GND
METAL
70U
HALF
+5V
SHUT
IC81
GP2S09-C
ROTATION DET
CN351
IC351
DISPLAY CONTROL
FLUORESCENT DISPLAY TUBE
FL351
A PLAY
DOLBY NR
B C OFF
HIGH
NORM
CD SYNC
B
REC PLAY
AMS RELAY
VCC
CLK
DATA
SYNC
KEY A
KEY B
RESET
TEST
OSC1
OSC2
GND
D301 SEL4226R
DUBBING MODE
D302 SEL4226R
CD SYNCHRO
R372 180
R374 180
X951 4.19MHz
(1, 2)
(3)
(12)

• IC BLOCK DIAGRAM

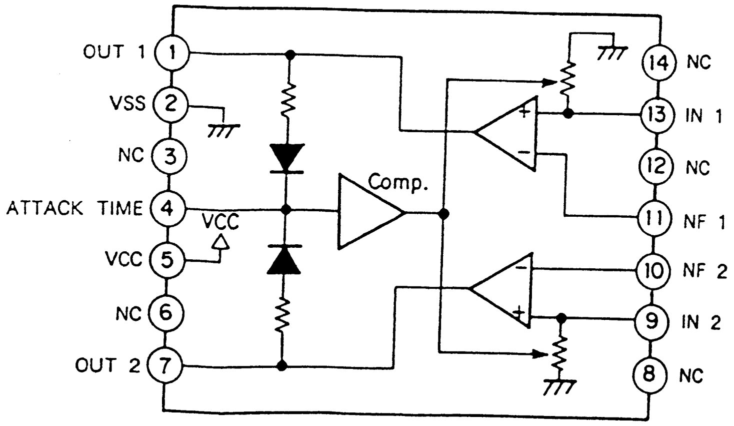
IC102 CXA1331M


LINE IN1 30
PB IN1 29
MPX OUT1 28
MPX IN1 27
NR SW 26
LINE OUT1 25
SSK IN1 24
VF IN1 23
SSK 1 22
VCT 1 21
TCH 1 20
TCL 1 19
REC OUT1 18
VCT 0 17
VCC 16
ATT
HLS
HDET
LDET
LLS
VCC
Mode Control
IREF
GND
1 LINE IN2
2 PB IN2
3 MPX OUT2
4 MPX IN2
5 MODE
6 LINE OUT2
7 SSK IN2
8 VF IN2
9 SSK 2
10 VCT 2
11 TCH 2
12 TCL 2
13 REC OUT2
14 IREF
15 GND

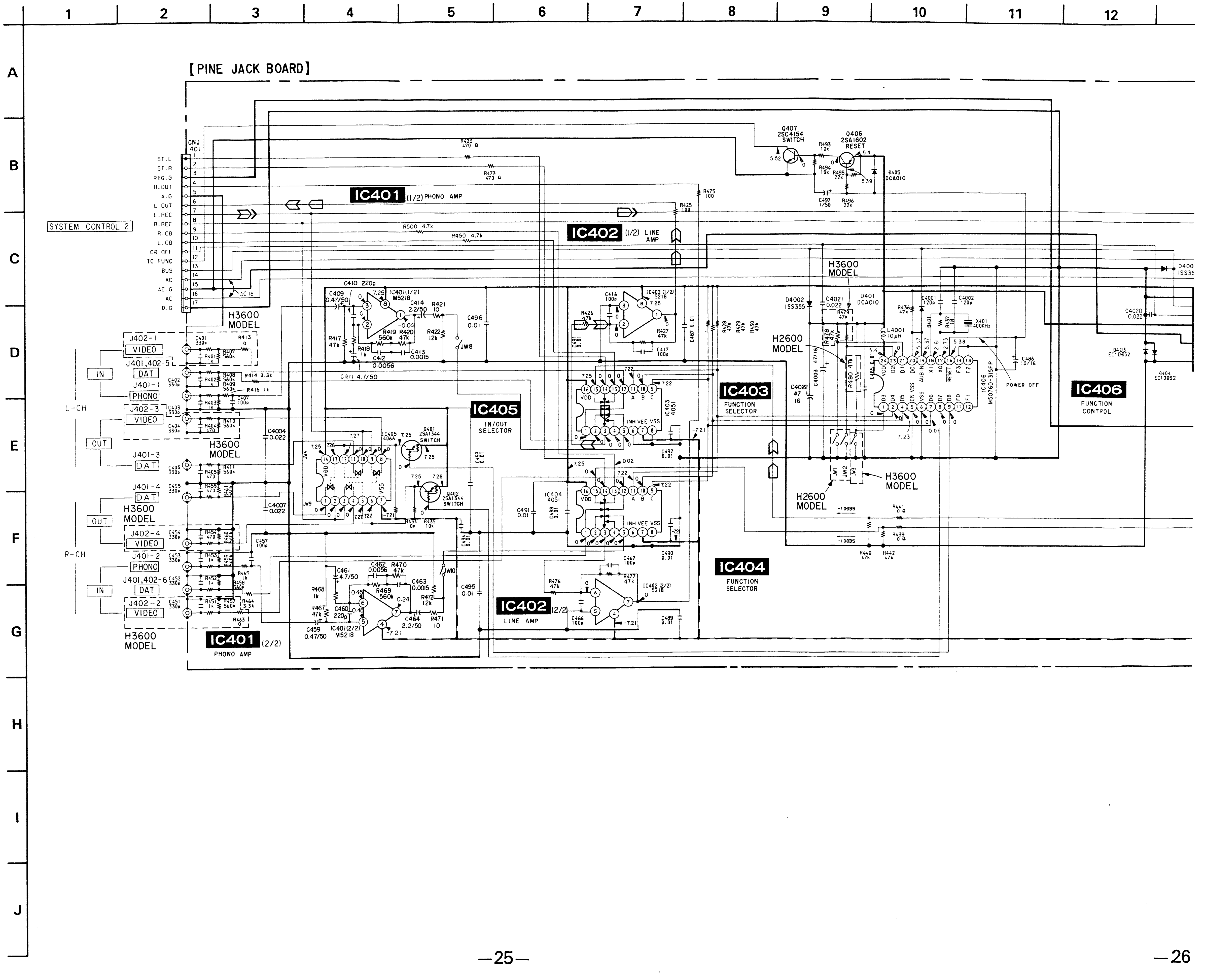
IC103 CXA1398M


GP CAL 16
REC MUTE 15
REC CAL 14
REC IN2 13
1 REF 12
BOOST 11
VCC 10
REC OUT2 9
BIAS
VCC
REC EQ
CONTROL
VGS
REC EQ
VEE
1 SPEED
2 METAL
3 TAPE EQ
4 REC IN1
5 GND (VG)
6 BOOST
7 VEE
8 REC OUT1

IC106 BA3308F


OUT 1 1
VSS 2
NC 3
ATTACK TIME 4
VCC 5
NC 6
OUT 2 7
VCC
Comp.
14 NC
13 IN 1
12 NC
11 NF 1
10 NF 2
9 IN 2
8 NC

4-5. SCHEMATIC DIAGRAM – PIN JACK SECTION –


1
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5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
[PINE JACK BOARD]
SYSTEM CONTROL 2
CNJ 401
ST.L
ST.R
REG.G
R.OUT
A.G
L.OUT
L.REC
R.REC
R.CD
L.CD
CD OFF
TC FUNC
BUS
AC
AC.G
AC
D.G
IC401 (1/2) PHONO AMP
IC402 (1/2) LINE AMP
IC403 FUNCTION SELECTOR
IC404 FUNCTION SELECTOR
IC405 IN/OUT SELECTOR
IC406 FUNCTION CONTROL
IC401 (2/2) PHONO AMP
IC402 (2/2) LINE AMP
IC401(1/2) M5218
IC401(2/2) M5218
IC402 (1/2) 5218
IC402 (2/2) 5218
IC403 4051
IC404 4051
IC405 4066
IC406 M50760-315FP
Q407 2SC4154 SWITCH
Q406 2SA1602 RESET
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
D405 DCA010
D401 DCA010
D4002 1SS355
D403 EC10QS2
D404 EC10QS2
X401 400KHz
L4001 10μH
POWER OFF
H3600 MODEL
H2600 MODEL
L-CH
R-CH
IN
OUT
J402-1
VIDEO
J401,402-5
DAT
J401-1
PHONO
J402-3
J401-3
J401-4
J402-4
J401-2
J401,402-6
J402-2
JW1
JW2
JW3
JW8
JW9
JW10
R500 4.7k
R450 4.7k
C410 220p
C411 4.7/50
C409 0.47/50
C459 0.47/50
C4004 0.022
C4007 0.022
C4020 0.022
C486 10/16

Note on Schematic Diagram:

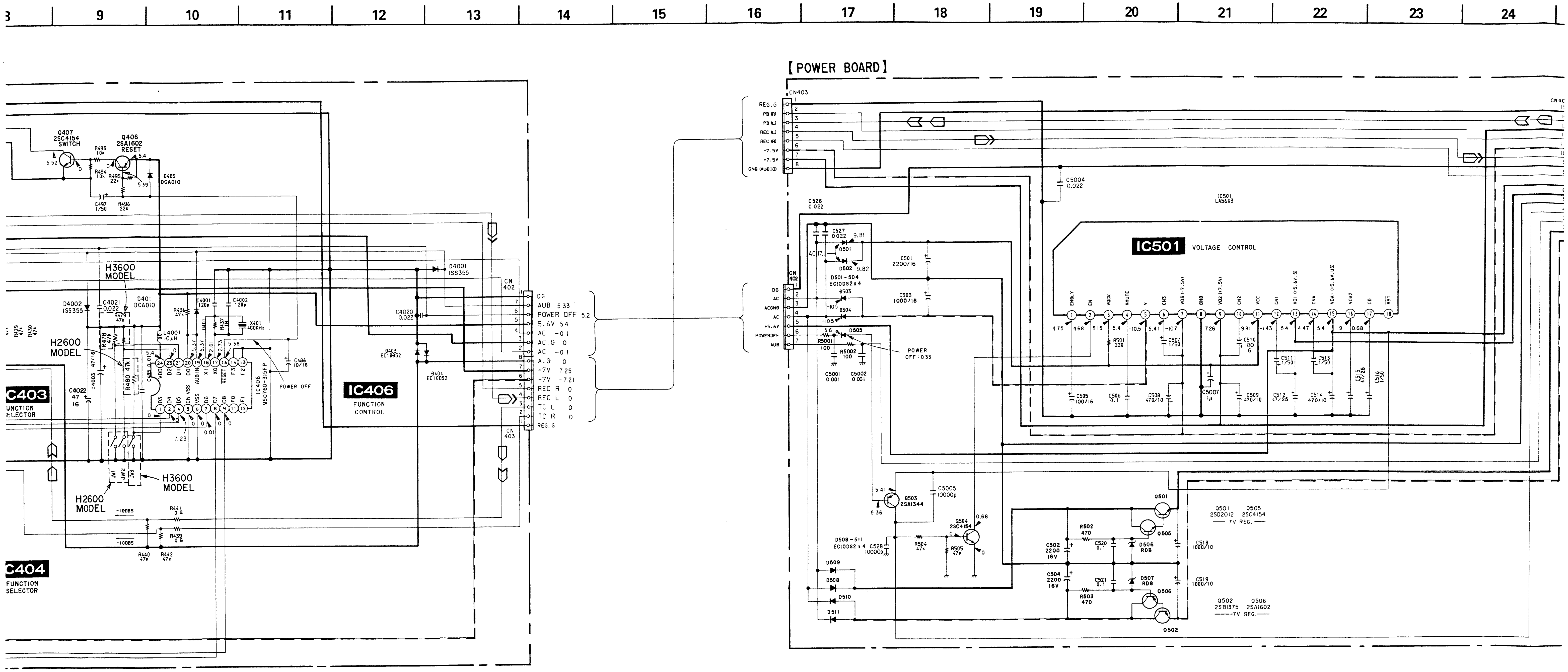
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- : nonflammable resistor.

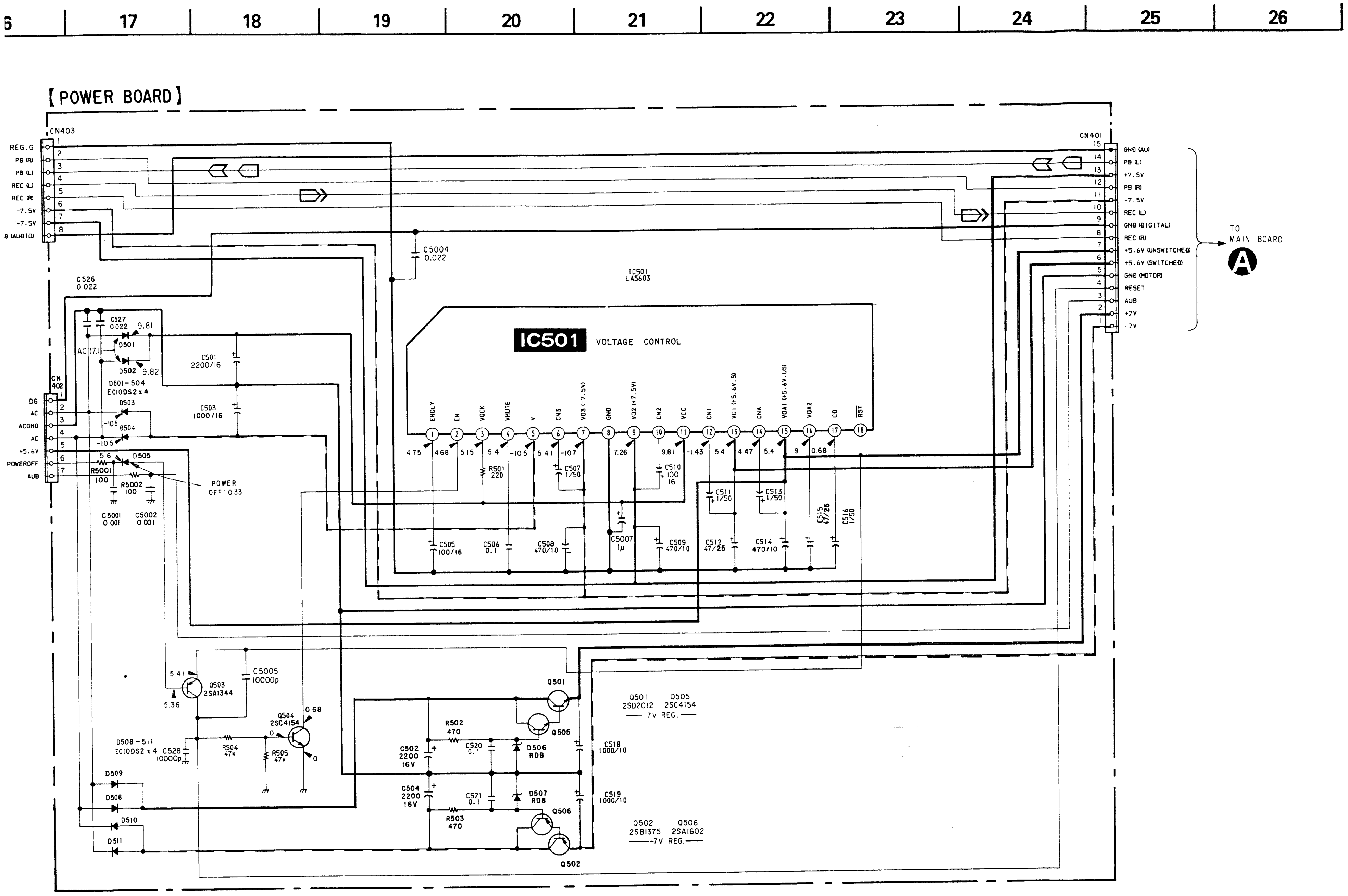
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line
- ▬ ▬ ▬ : B– Line
- ☐ : adjustment for repair.

no mark:	STOP	❚❚ :	PAUSE
( ):	PB	◀◀▶▶ :	FF/REW
< >:	REC		

- ▶ : FWD ◀ : REV ■ : STOP
  ▶▶ : FF ◀◀ : REW ● : REC
- Voltages are taken with a VOM (Input impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)


【POWER BOARD】
IC403
FUNCTION SELECTOR
IC404
FUNCTION SELECTOR
IC406
FUNCTION CONTROL
IC406 M50760-315FP
IC501
VOLTAGE CONTROL
IC501 LA5603
Q407 2SC4154 SWITCH
Q406 2SA1602 RESET
D405 DCA010
D401 DCA010
D4001 1SS355
D4002 1SS355
D403 EC10DS2
D404 EC10DS2
X401 400kHz
L4001 10μH
H3600 MODEL
H2600 MODEL
POWER OFF
CN402
CN403
DG
AUB 5.33
POWER OFF 5.2
5.6V 5.4
AC -0.1
AC.G 0
A.G 0
+7V 7.25
-7V -7.21
REC R 0
REC L 0
TC L 0
TC R 0
REG.G
PB (R)
PB (L)
REC (L)
REC (R)
-7.5V
+7.5V
GND (AUDIO)
ACGND
+5.6V
POWEROFF
D501-504 EC10DS2 x 4
D508-511 EC10DS2 x 4
Q503 2SA1344
Q504 2SC4154
Q501 2SD2012
Q505 2SC4154
7V REG.
Q502 2SB1375
Q506 2SA1602
-7V REG.
D506 RD8
D507 RD8
C501 2200/16
C503 1000/16
C502 2200 16V
C504 2200 16V
C518 1000/10
C519 1000/10
C5005 10000p
POWER OFF: 0.33



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17
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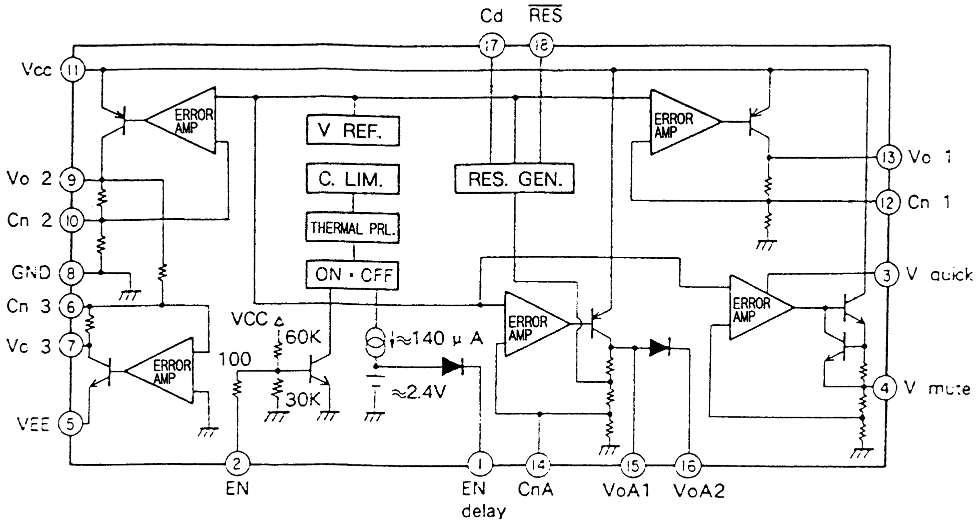
24
25
26
【POWER BOARD】
CN403
REG.G
PB (R)
PB (L)
REC (L)
REC (R)
-7.5V
+7.5V
B (AUDIO)
CN401
GND (AU)
PB (L)
+7.5V
PB (R)
-7.5V
REC (L)
GND (DIGITAL)
REC (R)
+5.6V (UNSWITCHED)
+5.6V (SWITCHED)
GND (MOTOR)
RESET
AUB
+7V
-7V
TO MAIN BOARD
A
C5004 0.022
C526 0.022
IC501 LA5603
IC501 VOLTAGE CONTROL
C527 0.022
D501
D502
D501-504 EC10DS2 x 4
D503
D504
D505
C501 2200/16
C503 1000/16
CN402
DG
AC
ACGND
AC
+5.6V
POWEROFF
AUB
R5001 100
R5002 100
POWER OFF: 0.33
C5001 0.001
C5002 0.001
ENDLY
EN
VGCK
VMUTE
V
CN3
VO3 (-7.5V)
GND
VO2 (+7.5V)
CN2
VCC
CN1
VO1 (+5.6V S)
CNA
VOA1 (+5.6V US)
VOA2
CD
RST
R501 220
C507 1/50
C510 100 16
C511 1/50
C513 1/50
C505 100/16
C506 0.1
C508 470/10
C5007 1µ
C509 470/10
C512 47/25
C514 470/10
C515 47/25
C516 1/50
Q503 2SA1344
C5005 10000p
Q504 2SC4154
D508-511 EC10DS2 x 4
C528 10000p
R504 47k
R505 47k
D509
D508
D510
D511
Q501
Q505
R502 470
C502 2200 16V
C520 0.1
D506 RD8
C518 1000/10
C504 2200 16V
C521 0.1
D507 RD8
C519 1000/10
R503 470
Q506
Q502
Q501 Q505 2SD2012 2SC4154 7V REG.
Q502 Q506 2SB1375 2SA1602 -7V REG.

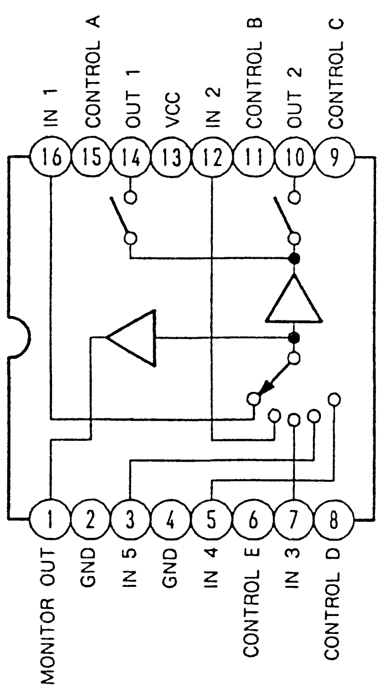
· IC BLOCK DIAGRAM

IC501 LA5603



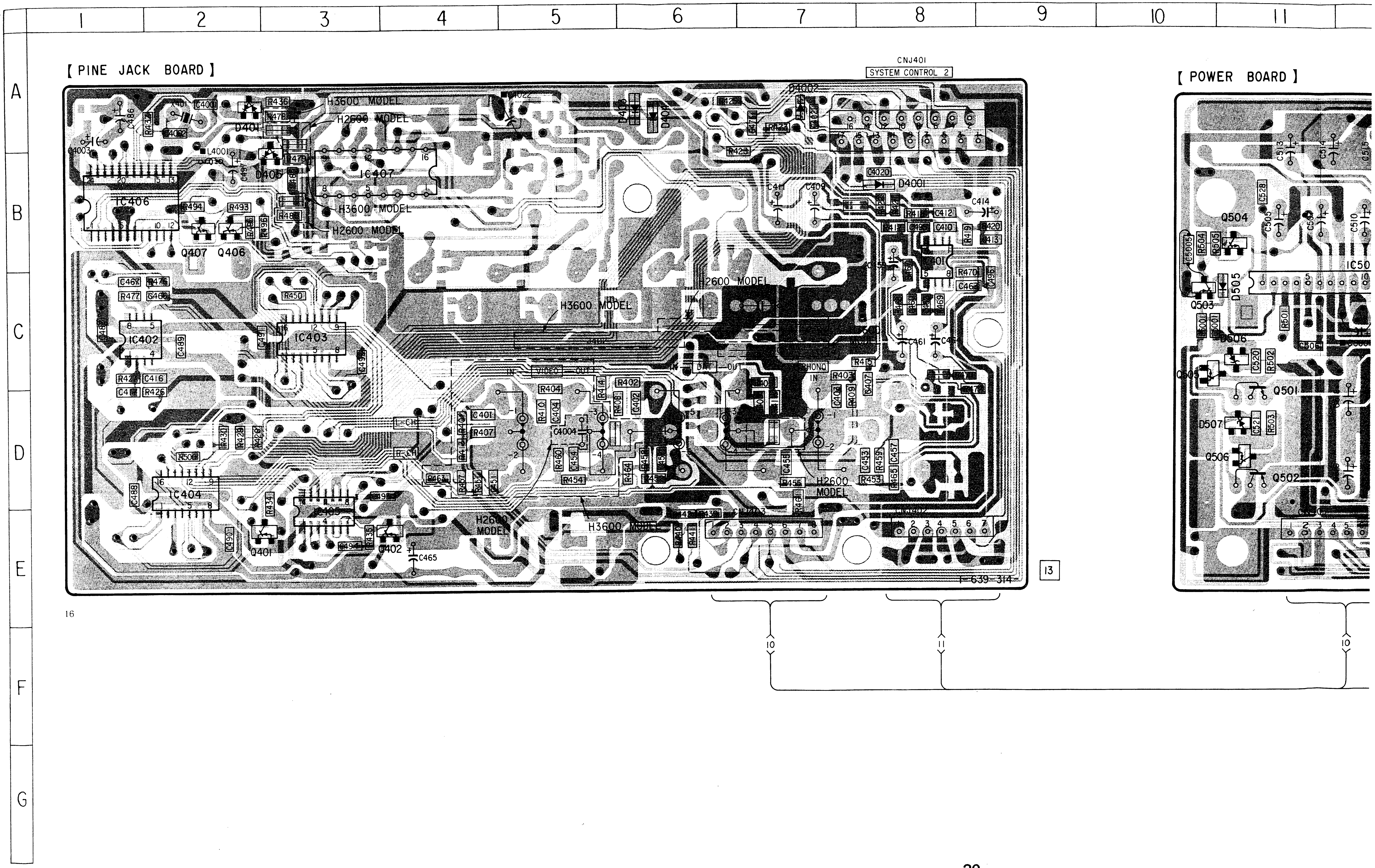
Cd
RES
Vcc 11
Vo 2 9
Cn 2 10
GND 8
Cn 3 6
Vc 3 7
VEE 5
ERROR AMP
V REF.
C. LIM.
THERMAL PRL.
ON · OFF
RES. GEN.
VCC
60K
100
30K
≈140 µ A
≈2.4V
13 Vo 1
12 Cn 1
3 V quick
4 V mute
2 EN
1 EN delay
14 CnA
15 VoA1
16 VoA2

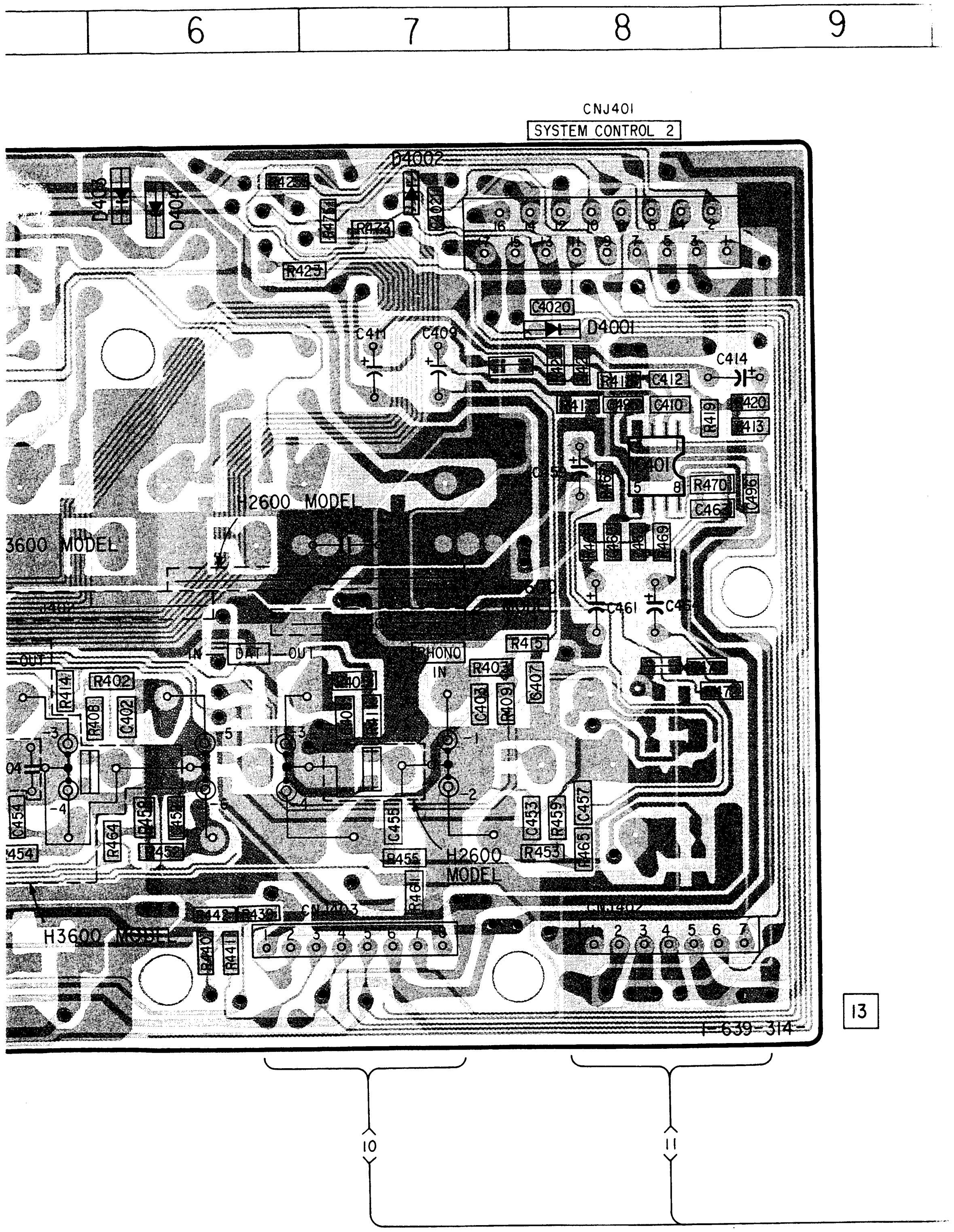
IC407 BA7625

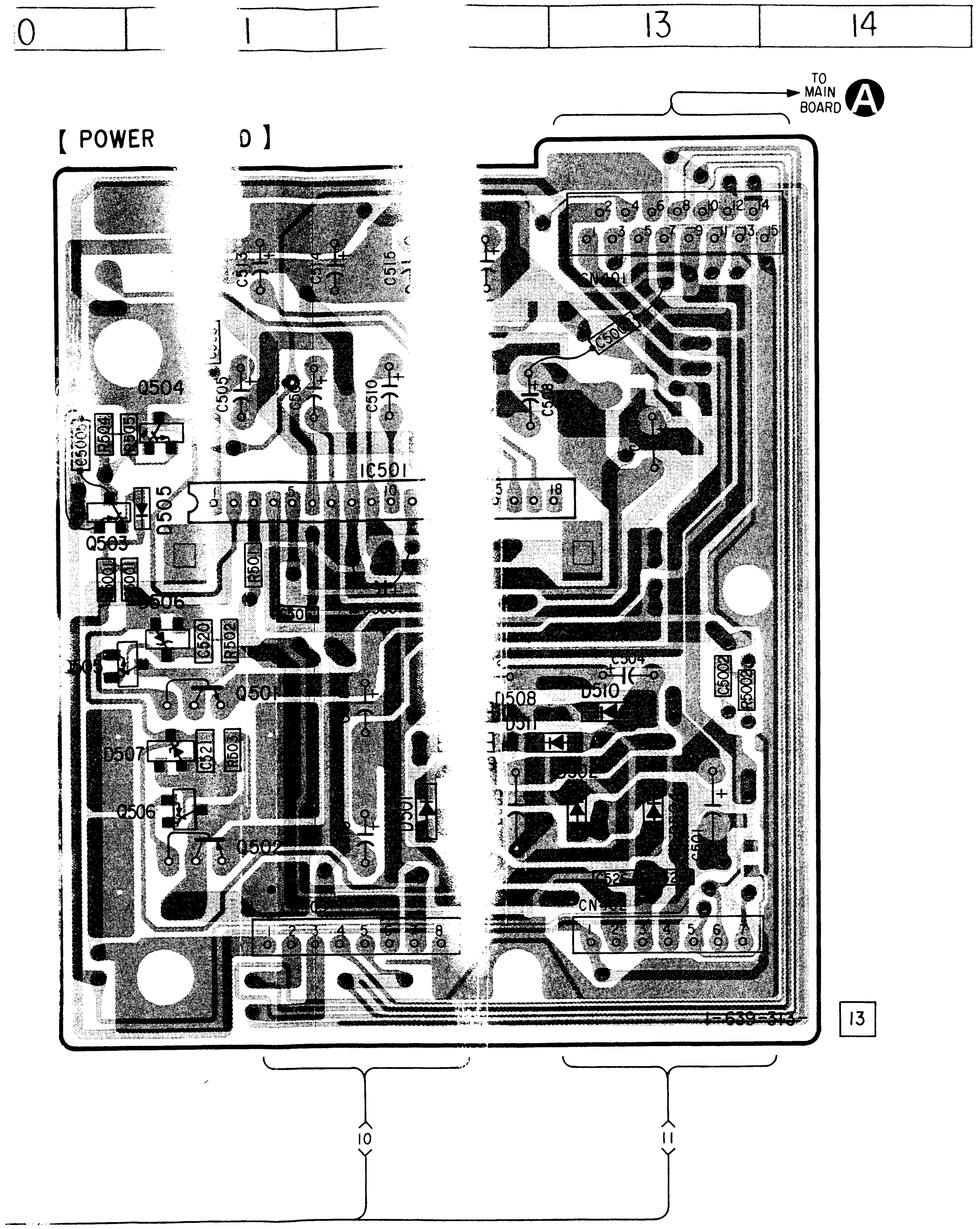


IN 1
CONTROL A
OUT 1
VCC
IN 2
CONTROL B
OUT 2
CONTROL C
16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
MONITOR OUT
GND
IN 5
GND
IN 4
CONTROL E
IN 3
CONTROL D

4-6. PRINTED WIRING BOARDS – PIN JACK SECTION –


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
【 PINE JACK BOARD 】
【 POWER BOARD 】
CNJ401
SYSTEM CONTROL 2
H3600 MODEL
H2600 MODEL
IC406
IC407
IC402
IC403
IC404
IC405
IC401
Q407
Q406
Q401
Q402
D401
D405
D4001
D4002
L4001
X401
VIDEO
IN
OUT
PHONO
L-CH
R-CH
CNJ402
CNJ403
C465
1-639-314-
13
16
Q504
Q503
D505
D506
Q505
Q501
D507
Q506
Q502
IC50
10
11
10


6
7
8
9
CNJ401
SYSTEM CONTROL 2
D4002
D4001
IC401
H2600 MODEL
3600 MODEL
H3600 MODEL
PHONO
IN
OUT
CNJ403
CNJ402
1-639-314-
13
10
11


0
1
13
14
[POWER
D]
TO MAIN BOARD
A
Q504
Q503
Q505
Q501
Q506
Q502
IC501
D505
D507
D508
D510
D511
CN401
CN502
1-639-313-
13
10
11

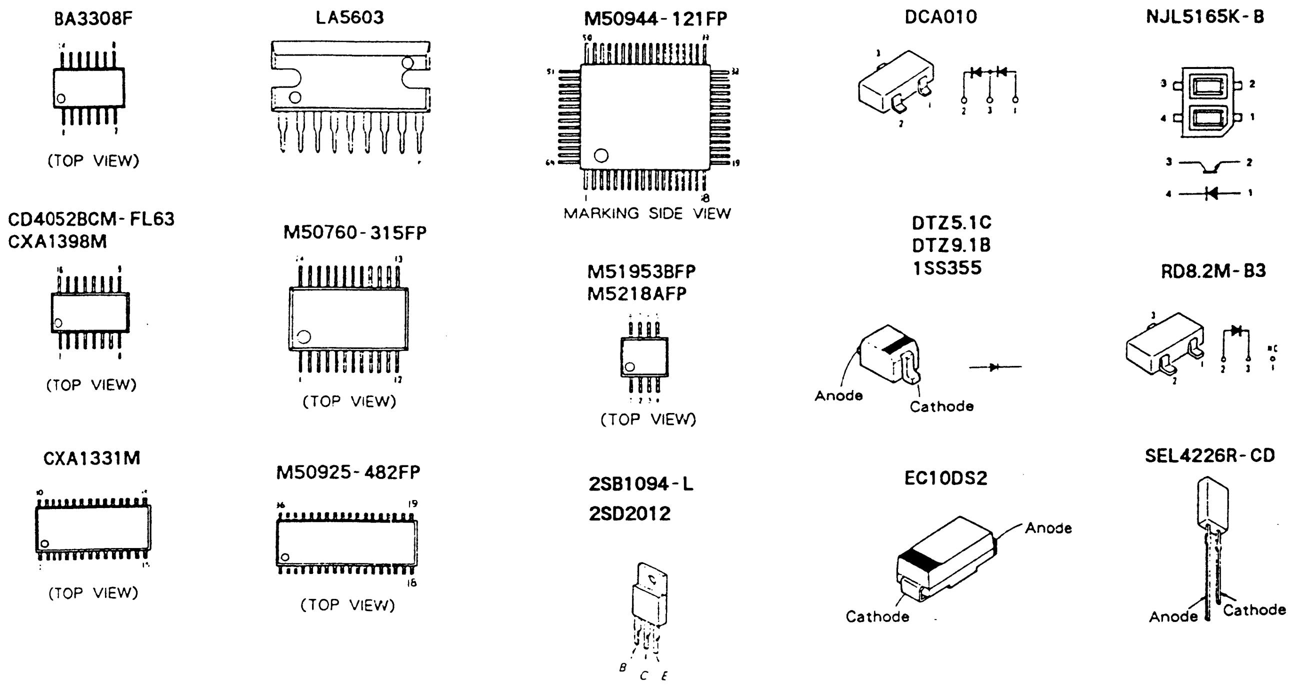
- Semiconductor Location

Ref. No.	Location
D401	A-2
D403	A-6
D404	A-6
D405	B-3
D501	D-12
D502	D-13
D503	D-12
D504	D-13
D505	C-11
D506	C-11
D507	D-11
D508	D-12
D509	D-12
D510	D-13
D511	D-13
D4001	B-8
D4002	A-7
IC401	C-8
IC402	C-1
IC403	C-3
IC404	D-2
IC405	E-3
IC406	B-1
IC501	C-12
Q401	E-3
Q402	E-4
Q406	B-2
Q407	B-2
Q501	D-11
Q502	D-11
Q503	C-10
Q504	B-11
Q505	C-10
Q506	D-11

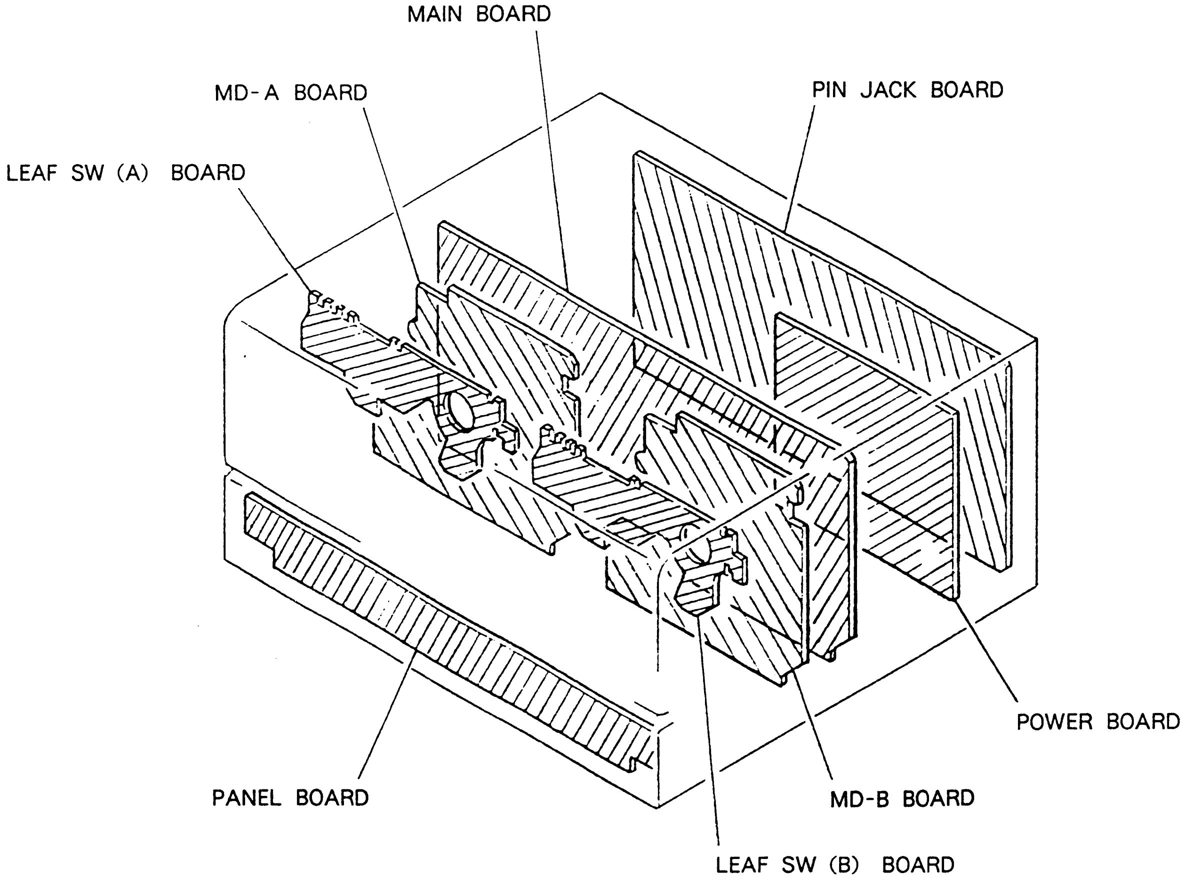
Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side
- ● : Through hole.
- ▒ : Pattern on the side which is seen.
- ▒ : Pattern of the rear side.

4-7. SEMICONDUCTOR LEAD LAYOUTS


BA3308F
(TOP VIEW)
LA5603
M50944-121FP
MARKING SIDE VIEW
DCA010
NJL5165K-B
CD4052BCM-FL63
CXA1398M
(TOP VIEW)
M50760-315FP
(TOP VIEW)
M51953BFP
M5218AFP
(TOP VIEW)
DTZ5.1C
DTZ9.1B
1SS355
Anode
Cathode
RD8.2M-B3
CXA1331M
(TOP VIEW)
M50925-482FP
(TOP VIEW)
2SB1094-L
2SD2012
B
C
E
EC10DS2
Anode
Cathode
SEL4226R-CD
Anode
Cathode

4-8. CIRCUIT BOARDS LOCATION

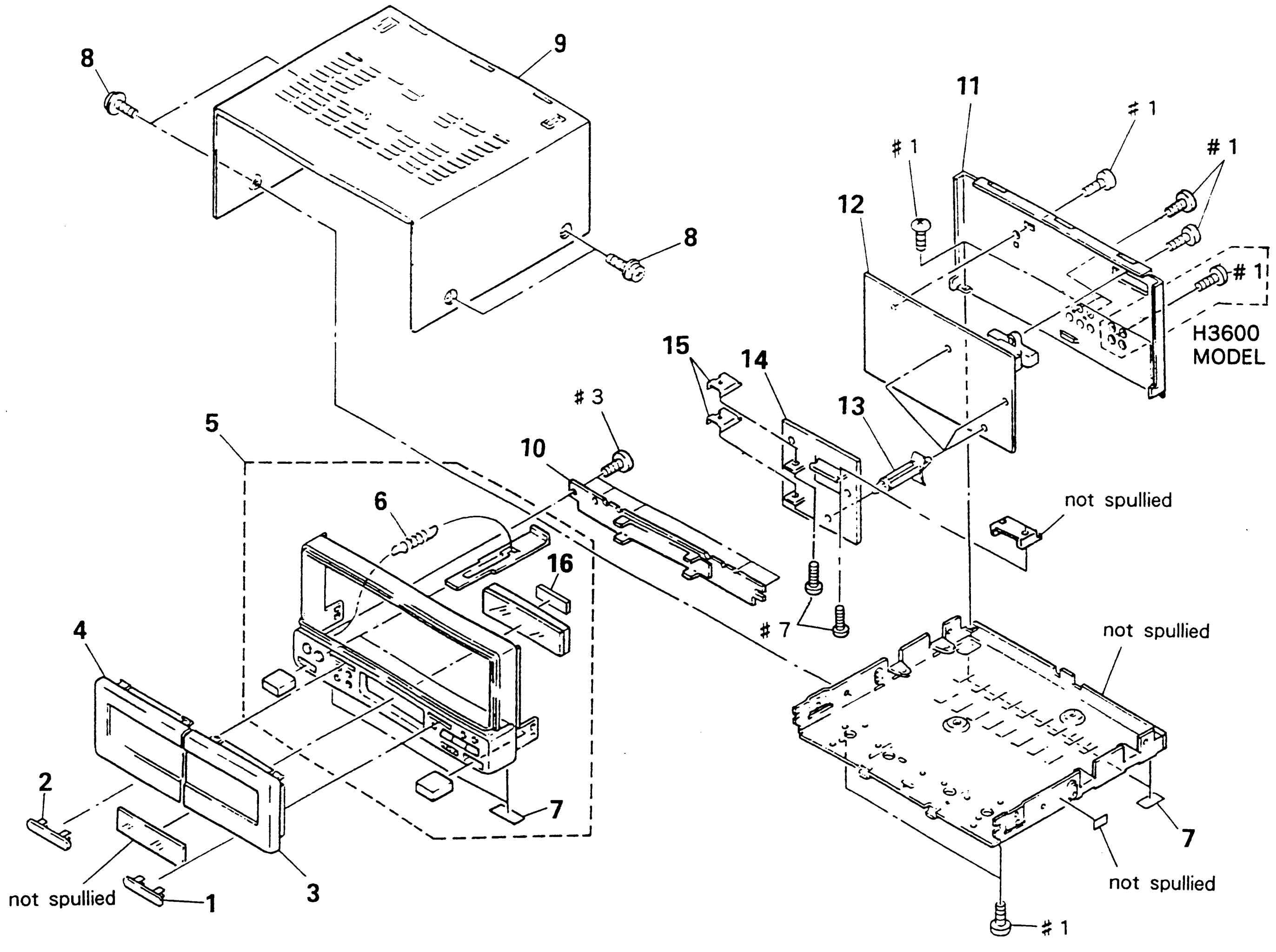

MAIN BOARD
MD-A BOARD
PIN JACK BOARD
LEAF SW (A) BOARD
POWER BOARD
PANEL BOARD
MD-B BOARD
LEAF SW (B) BOARD

SECTION 5
EXPLODED VIEWS

NOTE :

- – XX, – X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

5-1. FRONT PANEL SECTION-1


8
9
11
# 1
# 1
# 1
12
8
# 1
H3600
MODEL
15
14
# 3
13
5
10
6
not spullied
16
4
# 7
not spullied
2
7
7
not spullied
1
3
not spullied
# 1

Ref. No.	Part No.	Descriptiion	Remark
1	3-367-872-11	COVER(AZIMUTH)	
2	3-367-872-01	COVER(AZIMUTH)	
3	X-3362-918-1	LID(B)ASSY, CASSETTE	
4	X-3362-919-1	LID(A)ASSY, CASSETTE	
5	X-3362-921-1	PANEL ASSY, FRONT	
6	3-567-110-00	SPRING, TENSION	
7	4-930-336-01	FOOT(FELT)	
8	3-363-099-01	SCREW(CASE +3X8 TP2)	
9	* 4-944-522-01	CASE(K211522)	
10	* A-2006-410-A	PANEL BOARD	

Ref. No.	Part No.	Descriptiion	Remark
11	* 3-366-786-11	PANEL, BACK(H3600:EXCEPT Germany, Italian)	
	* 3-366-786-21	PANEL, BACK(H3600:Germany, Italian)	
	* 3-366-786-31	PANEL, BACK(H2600:EXCEPT Germany, Italian)	
	* 3-366-786-41	PANEL, BACK(H2600:Germany, Italian)	
12	* A-2006-411-A	PIN JACK BOARD(H3600)	
	* A-2006-417-A	PIN JACK BOARD(H2600)	
13	* 3-703-353-02	SUPPORT, PC BOARD	
14	* A-2006-613-A	POWER BOARD	
15	* 3-309-144-21	HEAT SINK	
16	4-906-024-11	TABLE, PEMT	

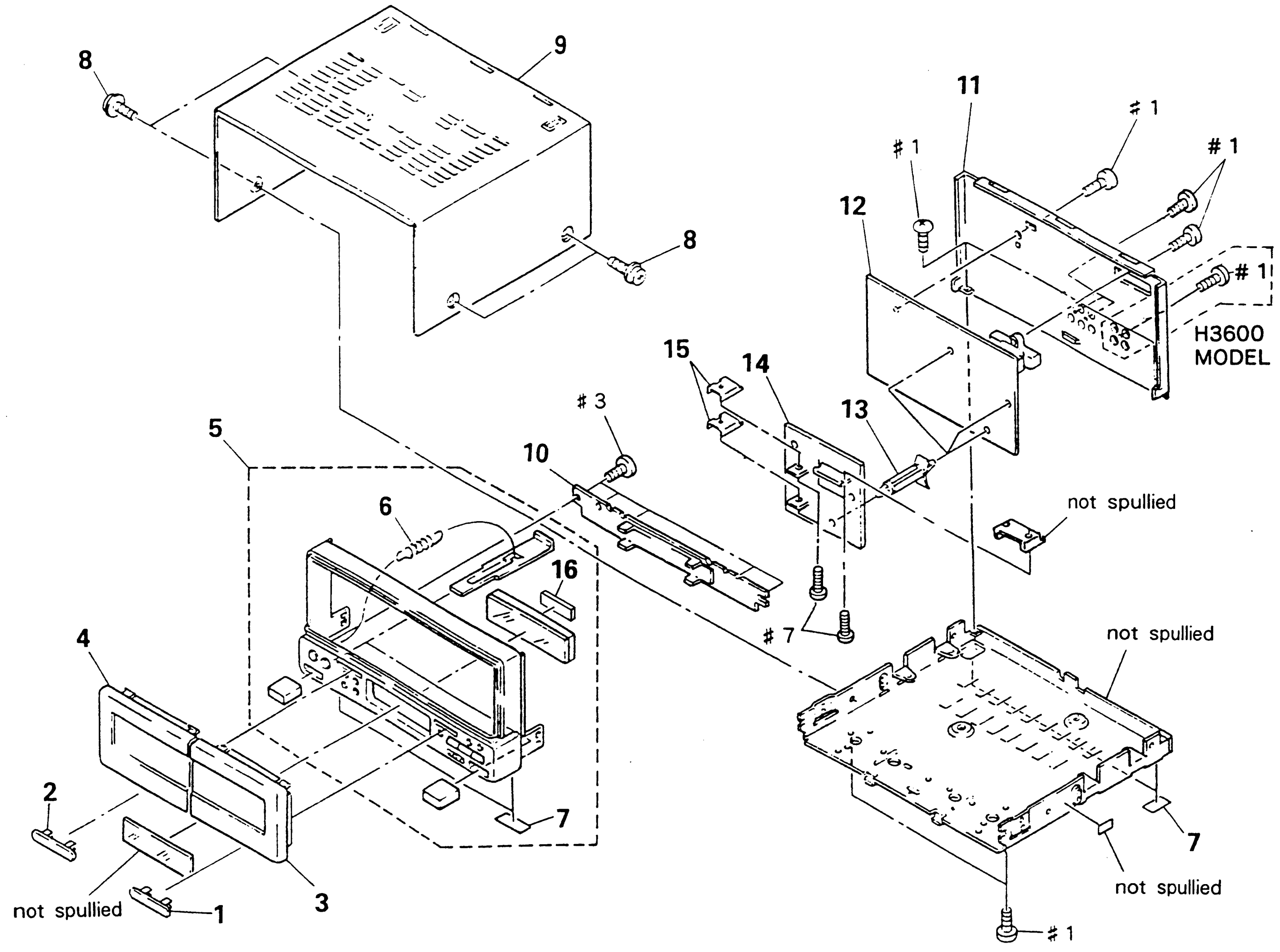
5-2. F

Ref. No.
51
52
53
54
55
56
57
58
59

SECTION 5
EXPLODED VIEWS

NOTE :
- − XX, − X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

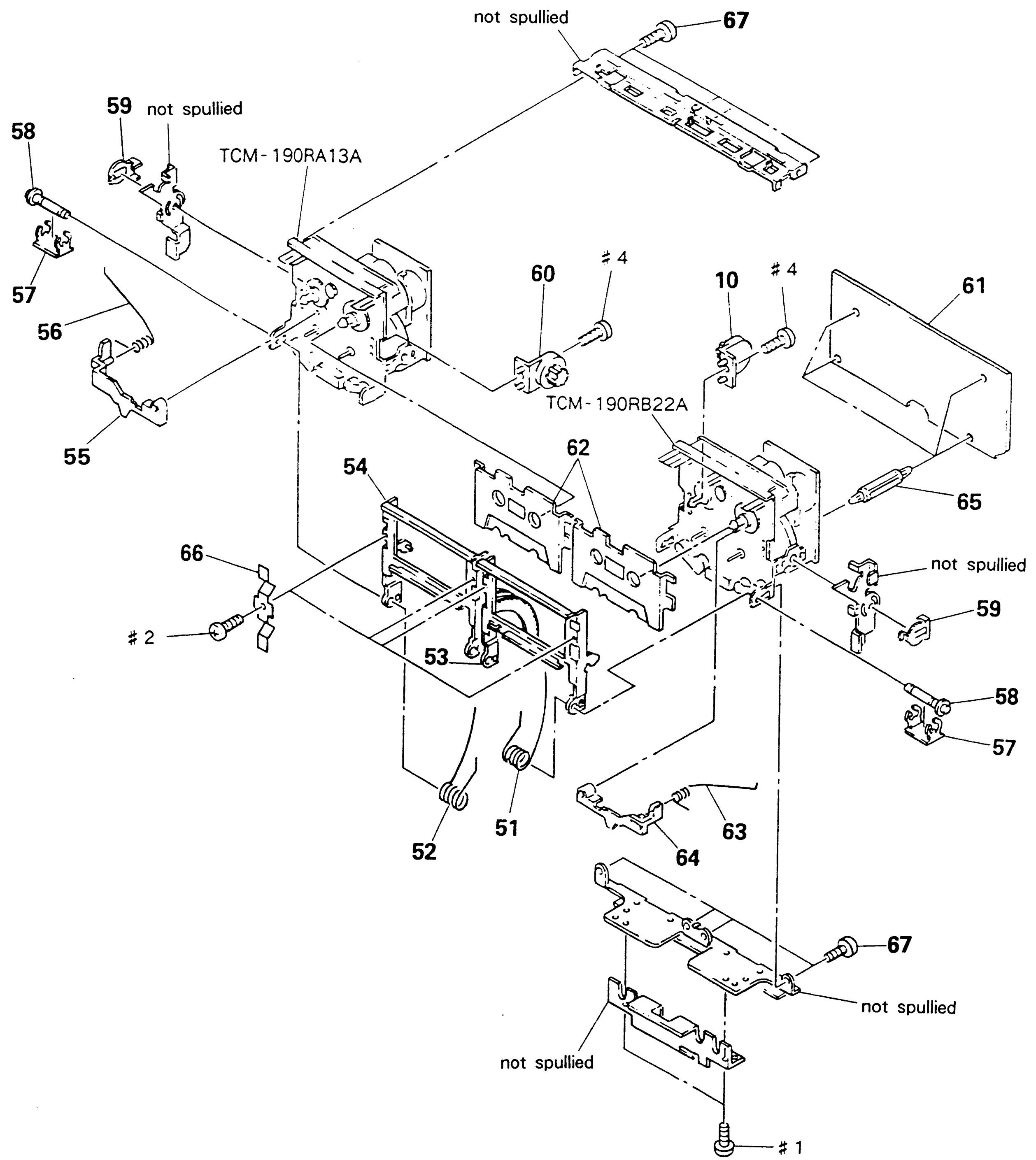
5-1. FRONT PANEL SECTION-1


8
9
11
# 1
# 1
# 1
12
8
# 1
H3600
MODEL
15
14
13
# 3
5
10
6
16
not spullied
4
# 7
not spullied
2
7
7
not spullied
not spullied
1
3
# 1

Ref. No.	Part No.	Descriptiion	Remark
1	3-367-872-11	COVER(AZIMUTH)	
2	3-367-872-01	COVER(AZIMUTH)	
3	X-3362-918-1	LID(B)ASSY, CASSETTE	
4	X-3362-919-1	LID(A)ASSY, CASSETTE	
5	X-3362-921-1	PANEL ASSY, FRONT	
6	3-567-110-00	SPRING, TENSION	
7	4-930-336-01	FOOT(FELT)	
8	3-363-099-01	SCREW(CASE +3X8 TP2)	
9	* 4-944-522-01	CASE(K211522)	
10	* A-2006-410-A	PANEL BOARD	

Ref. No.	Part No.	Descriptiion	Remark
11	* 3-366-786-11	PANEL, BACK(H3600:EXCEPT Germany, Italian)	
	* 3-366-786-21	PANEL, BACK(H3600:Germany, Italian)	
	* 3-366-786-31	PANEL, BACK(H2600:EXCEPT Germany, Italian)	
	* 3-366-786-41	PANEL, BACK(H2600:Germany, Italian)	
12	* A-2006-411-A	PIN JACK BOARD(H3600)	
	* A-2006-417-A	PIN JACK BOARD(H2600)	
13	* 3-703-353-02	SUPPORT, PC BOARD	
14	* A-2006-613-A	POWER BOARD	
15	* 3-309-144-21	HEAT SINK	
16	4-906-024-11	TABLE, PEMT	

5-2. FRONT PANEL SECTION-2

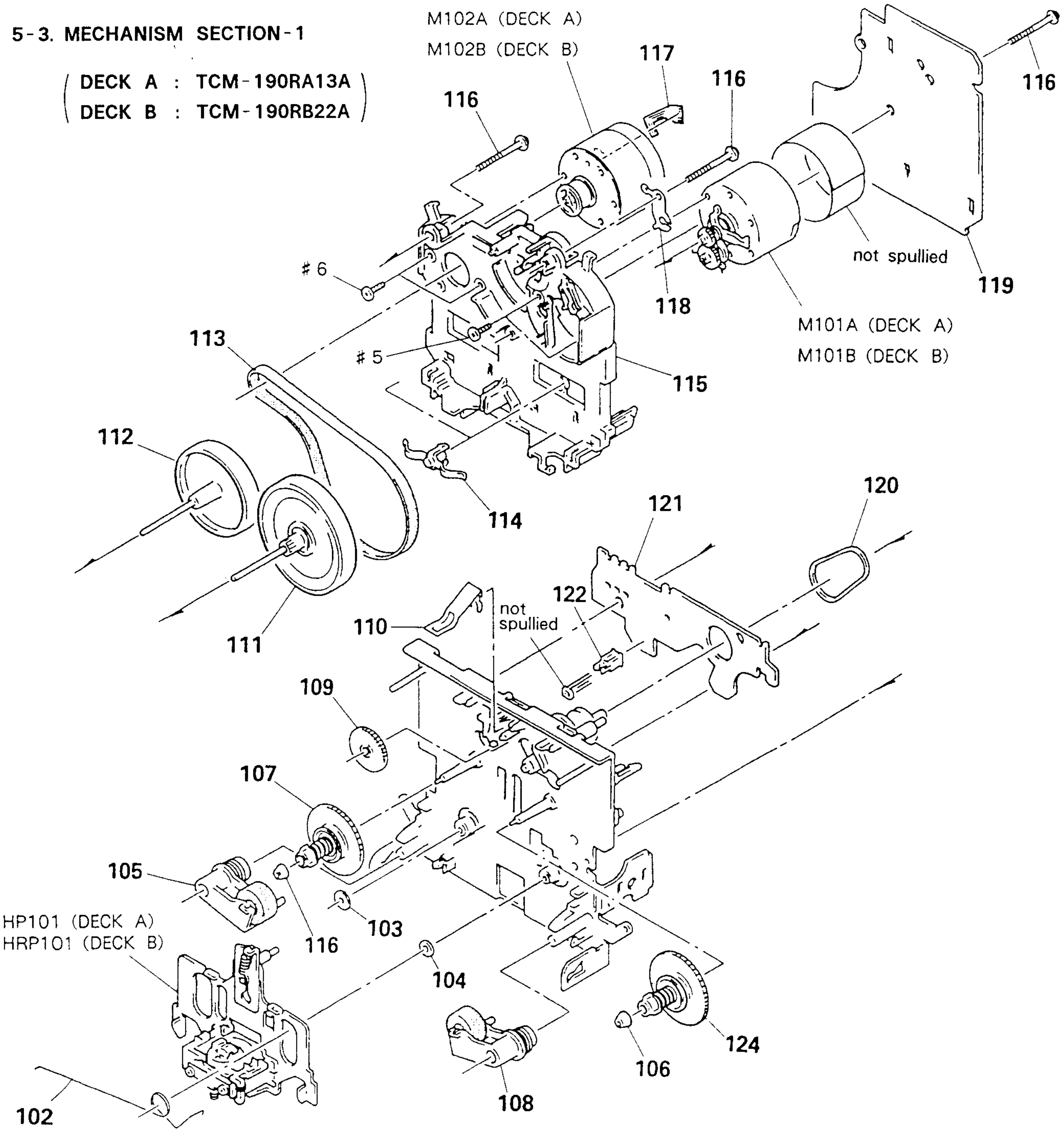

not spullied
67
59 not spullied
58
TCM-190RA13A
57
56
60
# 4
10
# 4
61
TCM-190RB22A
55
62
54
65
66
not spullied
59
# 2
53
58
57
52
51
63
64
67
not spullied
not spullied
# 1

Ref. No.	Part No.	Descriptiion	Remark
51	3-354-960-01	SPRING(LOADING R), TORSION	
52	3-354-959-01	SPRING(LOADING L), TORSION	
53	X-3362-856-1	HOLDER(R)ASSY, CASSETTE	
54	X-3362-857-1	HOLDER(L)ASSY, CASSETTE	
55	3-354-955-01	LEVER(EJ SAFTY LEVER L)	
56	3-354-961-01	SPRING(EJ SAFTY SPRING L)	
57	3-367-720-01	RING(W), RETAINING	
58	3-367-721-01	SHAFT(FULCRUM SHAFT)	
59	3-354-957-01	JOINT(LOCK LEVER)	

Ref. No.	Part No.	Descriptiion	Remark
60	3-354-963-01	DAMPER	
61	* A-2006-407-A	MAIN BOARD	
62	3-367-711-01	RETAINER, CASSETTE	
63	3-354-962-01	SPRING(EJ SAFTY SPRING R)	
64	3-354-956-01	LEVER(EJ SAFTY LEVER R)	
65	* 3-682-419-21	HOLDER, P.C.B	
66	3-340-137-01	SPRING, CASSETTE RETAINER	
67	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	

5-3. MECHANISM SECTION-1

(DECK A : TCM-190RA13A)
(DECK B : TCM-190RB22A)

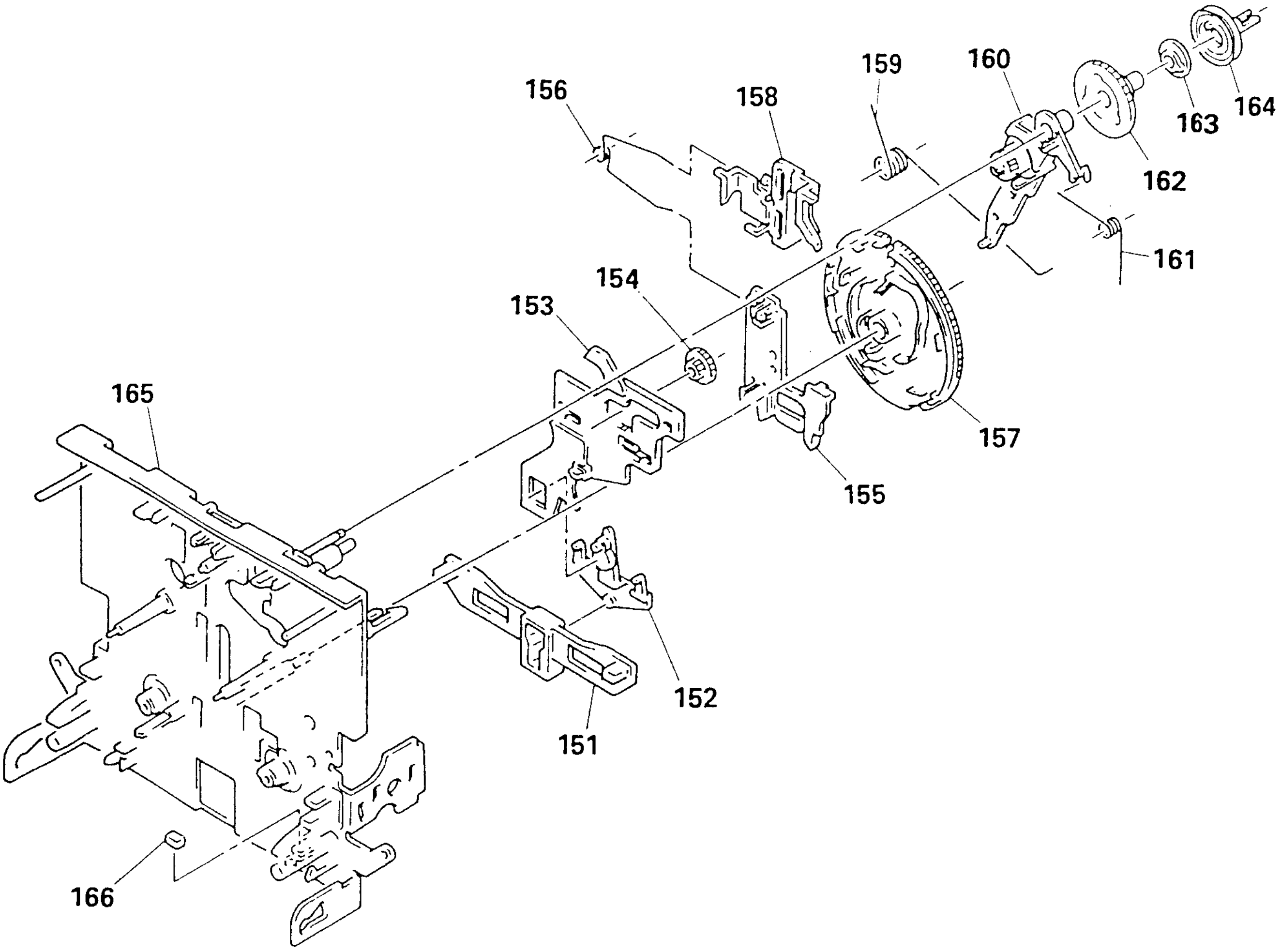

M102A (DECK A)
M102B (DECK B)
117
116
116
116
119
not spullied
118
M101A (DECK A)
M101B (DECK B)
# 6
# 5
113
115
112
114
121
120
122
not spullied
110
111
109
107
105
116
103
HP101 (DECK A)
HRP101 (DECK B)
104
124
106
108
102

Ref. No.	Part No.	Descriptiion	Remark
102	3-359-455-01	SPRING, TORSION	
103	3-356-714-01	WASHER	
104	3-356-713-01	WASHER	
105	X-3359-409-1	LEVER(PINCH LEVER REV) ASSY	
106	3-362-308-01	CAP(REEL)	
107	X-3362-078-1	TABLE ASSY(B), REEL	
108	X-3359-408-1	LEVER(PINCH LEVER FWD) ASSY	
109	3-359-424-01	GEAR(REV GEAR)	
110	3-359-430-01	SPRING(CASSETTE RETAINER), LEAF	
111	X-3359-406-1	FLYWHEEL(FWD) COMPLETE ASSY	
112	X-3359-410-1	FLYWHEEL(REV) ASSY	
113	3-359-417-01	BELT(FLAT), CAPSTAN	
114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
115	* 3-359-436-01	BASE(THRUST RETAINER), FITTING	
116	3-359-414-01	SCREW(+PTPWH 2X23)	

Ref. No.	Part No.	Descriptiion	Remark
117	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
118	3-359-450-01	PLATE, GROUND	
119	* A-2006-400-A	MD-B BOARD(RB22A)(DECK B)	
	* A-2006-399-A	MD-A BOARD(RA12A)(DECK A)	
120	3-359-466-01	BELT(FR), SQUARE	
121	* 1-634-841-11	LEAF SW(B)BOARD(RB22A)(DECK B)	
	* 1-634-841-11	LEAF SW(A)BOARD(RA12A)(DECK A)	
122	3-343-419-01	HOLDER(S SENSOR A)	
124	X-3359-404-1	TABLE ASSY, REEL	
HP101	A-2003-868-B	BASE ASSY, HEAD(DECK A)	
HRP101	A-2003-838-A	BASE ASSY, HEAD(DECK B)	
M101A	A-2003-474-A	MOTOR(REEL MOTOR) ASSY(DECK A)	
M101B	A-2003-474-A	MOTOR(REEL MOTOR) ASSY(DECK B)	
M102A	X-3359-417-1	MOTOR(CAPSTAN MOTOR) ASSY(DECK A)	
M102B	X-3359-417-1	MOTOR(CAPSTAN MOTOR) ASSY(DECK B)	

5-4. MECHANISM SECTION-2

(DECK A : TCM-190RA13A
DECK B : TCM-190RB22A)



Ref. No.	Part No.	Descriptiion	Remark
151	* 3-359-425-01	SLIDER(REVERSE SLIDER)	
152	3-359-426-01	LEVER(REVERSE LEVER)	
153	* 3-359-415-01	SLIDER(TRIGGER SLIDER)	
154	3-359-448-01	GEAR(TRIGGER)	
155	* 3-359-427-01	SLIDER(LEVERSE SLIDER)	
156	3-359-454-01	SPRING,TORSION	
157	3-359-420-01	GEAR(CAM GEAR)	
158	3-359-429-01	SLIDER(BRAKE PLATE)	
159	3-359-456-01	SPRING(TRIGGER SPRING),TORSION	
160	X-3359-405-1	LEVER(FR ARM) ASSY	
161	3-359-453-01	SPRING(FR ARM),TORSION	
162	3-359-419-01	GEAR(FR GEAR)	
163	3-359-421-01	CLUTCH(REEL DISK)	
164	3-359-418-01	PULLEY(FR PULLEY)	
165	X-3359-415-1	CHASSIS ASSY,MECHANICAL	
166	3-359-469-01	SPACER	

SECTION 6
ELECTRICAL PARTS LIST

MAIN PANEL PIN JACK POWER

NOTE :

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be defferent from the parts specified in the diagrams or the components used on the set.
- − XX, − X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... ,
  uPB... , μPB... , uPC... , μPC... ,
  uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Descriptiion				Remark
	* A-2006-407-A	MAIN BOARD				
		**********				
	* A-2006-410-A	PANEL BOARD				
		***********				
	* A-2006-411-A	PIN JACK BOARD (H3600)				
	* A-2006-417-A	PIN JACK BOARD (H2600)				
		**************				
	* A-2006-613-A	POWER BOARD				
		***********				
	* 3-309-144-21	HEAT SINK				
	* 3-367-839-01	HOLDER, FL TUBE				
	9-911-863-XX	SPACER				
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S				
		(CAPACITOR)				
C101	1-136-158-00	FILM	0.027uF	5%	50V	
C102	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C103	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	
C104	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C105	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C106	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C107	1-136-174-00	FILM	0.56uF	5%	50V	
C108	1-136-171-00	FILM	0.33uF	5%	50V	
C109	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C110	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C111	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C112	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C113	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C114	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C115	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C116	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C201	1-136-158-00	FILM	0.027uF	5%	50V	
C202	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C203	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	
C204	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C205	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C206	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C207	1-136-174-00	FILM	0.56uF	5%	50V	
C208	1-136-171-00	FILM	0.33uF	5%	50V	
C209	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C210	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C211	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C212	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C213	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C214	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C215	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C216	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C351	1-126-163-11	ELECT	4.7uF	20%	50V	
C352	1-124-638-11	ELECT	22uF	20%	10V	
C353	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C354	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C401	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	(H3600)
C402	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C404	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	(H3600)
C405	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C407	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C409	1-124-465-00	ELECT	0.47uF	20%	50V	
C410	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C411	1-126-163-11	ELECT	4.7uF	20%	50V	
C412	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	
C413	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	
C414	1-124-257-00	ELECT	2.2uF	20%	50V	
C416	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C417	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C451	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	(H3600)
C452	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C453	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C454	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	(H3600)
C455	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C459	1-124-465-00	ELECT	0.47uF	20%	50V	
C460	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C461	1-126-163-11	ELECT	4.7uF	20%	50V	
C462	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	
C463	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	
C464	1-124-257-00	ELECT	2.2uF	20%	50V	
C466	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C467	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C485	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C486	1-126-157-11	ELECT	10uF	20%	16V	
C487	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C488	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C489	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C490	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C491	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C492	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C493	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C494	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C495	1-164-232-11	CERAMIC CHIP	0.01uF		50V	

MAIN PANEL PIN JACK POWER

Ref. No.	Part No.	Description				Remark
C496	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C497	1-126-301-11	ELECT	1uF	20%	50V	
C501	1-124-556-11	ELECT	2200uF	20%	16V	
C502	1-124-556-11	ELECT	2200uF	20%	16V	
C503	1-124-360-00	ELECT	1000uF	20%	16V	
C504	1-124-556-11	ELECT	2200uF	20%	16V	
C505	1-126-023-11	ELECT	100uF	20%	16V	
C506	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C507	1-124-903-11	ELECT	1uF	20%	50V	
C508	1-124-472-11	ELECT	470uF	20%	10V	
C509	1-124-472-11	ELECT	470uF	20%	10V	
C510	1-126-023-11	ELECT	100uF	20%	16V	
C511	1-124-903-11	ELECT	1uF	20%	50V	
C512	1-124-477-11	ELECT	47uF	20%	25V	
C513	1-124-903-11	ELECT	1uF	20%	50V	
C514	1-124-472-11	ELECT	470uF	20%	10V	
C515	1-124-477-11	ELECT	47uF	20%	25V	
C516	1-124-903-11	ELECT	1uF	20%	50V	
C518	1-124-473-11	ELECT	1000uF	20%	10V	
C519	1-124-473-11	ELECT	1000uF	20%	10V	
C520	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C521	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C526	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C527	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C528	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C601	1-164-346-11	CERAMIC CHIP	1uF		16V	
C602	1-164-346-11	CERAMIC CHIP	1uF		16V	
C603	1-164-346-11	CERAMIC CHIP	1uF		16V	
C604	1-164-346-11	CERAMIC CHIP	1uF		16V	
C605	1-164-346-11	CERAMIC CHIP	1uF		16V	
C606	1-164-346-11	CERAMIC CHIP	1uF		16V	
C607	1-164-346-11	CERAMIC CHIP	1uF		16V	
C608	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C609	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C610	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C611	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C612	1-164-222-11	CERAMIC CHIP	0.22uF		25V	
C615	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C616	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C617	1-124-472-11	ELECT	470uF	20%	10V	
C618	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C619	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C620	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C621	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C622	1-124-472-11	ELECT	470uF	20%	10V	
C623	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C624	1-124-472-11	ELECT	470uF	20%	10V	
C625	1-126-059-11	ELECT	10uF	20%	50V	
C626	1-126-059-11	ELECT	10uF	20%	50V	
C629	1-126-157-11	ELECT	10uF	20%	16V	
C632	1-136-594-11	FILM	0.018uF	5%	100V	
C633	1-124-234-00	ELECT	22uF	20%	16V	
C639	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C862	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C4001	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C4002	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C4003	1-124-589-11	ELECT	47uF	20%	16V	
C4004	1-101-005-00	CERAMIC	22000PF		50V	
C4007	1-101-005-00	CERAMIC	22000PF		50V	

Ref. No.	Part No.	Description				Remark
C4020	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4021	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4022	1-124-589-11	ELECT	47uF	20%	16V	
C5001	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C5002	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C5004	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C5005	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C5007	1-124-903-11	ELECT	1uF	20%	50V	
C6008	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C6009	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C6010	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C6011	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C6012	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C6013	1-126-023-11	ELECT	100uF	20%	16V	
C6020	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C6021	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C6022	1-164-346-11	CERAMIC CHIP	1uF		16V	
C6026	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C6027	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C6029	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C6030	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C6031	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C6035	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
		(CONNECTOR)				
CN351	1-580-883-21	SOCKET, CONNECTOR (SMT) 12P				
CN401	1-568-834-11	SOCKET, CONNECTOR 15P				
CN402	* 1-573-187-11	SOCKET, CONNECTOR 7P				
CN403	1-573-388-11	SOCKET, CONNECTOR 8P				
CN601	1-573-101-11	SOCKET, CONNECTOR 9P				
CN602	1-580-783-11	PLUG, CONNECTOR				
CN603	1-573-101-11	SOCKET, CONNECTOR 9P				
CN604	1-580-783-11	PLUG, CONNECTOR				
CN605	* 1-568-858-11	SOCKET, CONNECTOR 15P				
CN606	1-568-795-11	SOCKET, CONNECTOR 12P				
CN607	1-580-783-11	PLUG, CONNECTOR				
CNJ401	* 1-580-740-11	SOCKET, CONNECTOR 17P(SYSTEM CONTROL 2)				
		(DIODE)				
D301	8-719-312-30	DIODE SEL4226R-CD				
D302	8-719-312-30	DIODE SEL4226R-CD				
D401	8-719-990-36	DIODE DCA010				
D403	8-719-210-33	DIODE EC10DS2				
D404	8-719-210-33	DIODE EC10DS2				
D405	8-719-990-36	DIODE DCA010				
D501	8-719-210-33	DIODE EC10DS2				
D502	8-719-210-33	DIODE EC10DS2				
D503	8-719-210-33	DIODE EC10DS2				
D504	8-719-210-33	DIODE EC10DS2				
D505	8-719-988-62	DIODE 1SS355				
D506	8-719-106-36	DIODE RD8.2M-B3				
D507	8-719-106-36	DIODE RD8.2M-B3				
D508	8-719-210-33	DIODE EC10DS2				
D509	8-719-210-33	DIODE EC10DS2				
D510	8-719-210-33	DIODE EC10DS2				
D511	8-719-210-33	DIODE EC10DS2				
D601	8-719-977-24	DIODE DTZ9.1B				
D602	8-719-988-62	DIODE 1SS355				
D603	8-719-988-62	DIODE 1SS355				

MAIN **PANEL** **PIN JACK** **POWER**

Ref. No.	Part No.	Descriptiion	Remark
D604	8-719-210-33	DIODE EC10DS2	
D605	8-719-988-62	DIODE 1SS355	
D606	8-719-977-20	DIODE DTZ5.1C	
D607	8-719-210-33	DIODE EC10DS2	
D608	8-719-210-33	DIODE EC10DS2	
D4001	8-719-988-62	DIODE 1SS355	
D4002	8-719-988-62	DIODE 1SS355	
D6010	8-719-988-62	DIODE 1SS355	
D6011	8-719-988-62	DIODE 1SS355	
D6012	8-719-988-62	DIODE 1SS355	
		(INDICATOR)	
FL351	1-519-638-11	INDICATOR TUBE, FLUORESCENT	
		(IC)	
IC101	8-759-300-71	IC HD14053BFP	
IC102	8-752-055-08	IC CXA1331M	
IC103	8-752-056-00	IC CXA1398M	
IC104	8-759-636-55	IC M5218AFP	
IC105	8-759-516-47	IC CD4066BCM-FL63	
IC106	8-759-998-71	IC BA3308F	
IC351	8-759-323-35	IC HD-614023	
IC401	8-759-636-55	IC M5218AFP	
IC402	8-759-636-55	IC M5218AFP	
IC403	8-759-009-05	IC MC14051BF	
IC404	8-759-009-05	IC MC14051BF	
IC405	8-759-516-47	IC CD4066BCM	
IC406	8-759-636-35	IC M50760-315FP	
IC501	8-759-823-46	IC LA5603	
IC601	8-759-636-37	IC M50944-121FP	
IC602	8-759-636-67	IC M50925-482FP	
IC603	8-759-207-05	IC TA7272P	
IC604	8-759-636-55	IC M5218AFP	
IC605	8-759-516-41	IC CD4052BCM-FL63	
IC6001	8-759-634-43	IC M51953BFP	
		(JACK)	
J401	1-565-304-11	JACK, PIN 4P (PHONO IN/DAT OUT)(H3600)	
J401	* 1-569-812-11	JACK, PIN 6P (PHONO/DAT)(H2600)	
J402	* 1-569-812-11	JACK, PIN 6P (DAT IN/VIDEO)(H3600)	
		(JUMPER)	
JW1	1-216-295-00	METAL CHIP 0 5% 1/10W(H2600)	
JW2	1-216-295-00	METAL CHIP 0 5% 1/10W(H2600)	
JW3	1-216-295-00	METAL CHIP 0 5% 1/10W(H3600)	
JW8	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW10	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW12	1-216-295-00	METAL CHIP 0 5% 1/10W(H3600)	
JW14	1-216-295-00	METAL CHIP 0 5% 1/10W(H2600)	
		(COIL)	
L601	1-410-761-11	INDUCTOR 0.68mH	
L602	1-410-757-21	INDUCTOR 0.33mH	
L4001	1-408-777-00	INDUCTOR CHIP 10uH	
L6001	1-410-482-31	INDUCTOR 100uH	
L6002	1-408-777-00	INDUCTOR CHIP 10uH	
		(TRANSISTOR)	
Q101	8-729-805-41	TRANSISTOR 2SC3398	
Q102	8-729-805-42	TRANSISTOR 2SC3859	

Ref. No.	Part No.	Descriptiion	Remark
Q201	8-729-805-41	TRANSISTOR 2SC3398	
Q202	8-729-805-42	TRANSISTOR 2SC3859	
Q401	8-729-805-65	TRANSISTOR 2SA1344	
Q402	8-729-805-65	TRANSISTOR 2SA1344	
Q406	8-729-602-36	TRANSISTOR 2SA1602-F	
Q407	8-729-602-21	TRANSISTOR 2SC4154-F	
Q501	8-729-209-15	TRANSISTOR 2SD2012	
Q502	8-729-111-67	TRANSISTOR 2SB1094-L	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-602-21	TRANSISTOR 2SC4154-F	
Q505	8-729-602-21	TRANSISTOR 2SC4154-F	
Q506	8-729-602-36	TRANSISTOR 2SA1602-F	
Q601	8-729-805-65	TRANSISTOR 2SA1344	
Q602	8-729-805-65	TRANSISTOR 2SA1344	
Q603	8-729-805-41	TRANSISTOR 2SC3398	
Q604	8-729-805-65	TRANSISTOR 2SA1344	
Q605	8-729-805-69	TRANSISTOR 2SA1341	
Q606	8-729-805-45	TRANSISTOR 2SC3395	
Q607	8-729-805-65	TRANSISTOR 2SA1344	
Q608	8-729-805-65	TRANSISTOR 2SA1344	
Q609	8-729-805-41	TRANSISTOR 2SC3398	
Q611	8-729-805-65	TRANSISTOR 2SA1344	
Q612	8-729-805-41	TRANSISTOR 2SC3398	
Q613	8-729-805-41	TRANSISTOR 2SC3398	
Q616	8-729-804-41	TRANSISTOR 2SB1122-S	
Q617	8-729-804-41	TRANSISTOR 2SB1122-S	
Q619	8-729-808-01	TRANSISTOR 2SD1622-S	
Q620	8-729-808-01	TRANSISTOR 2SD1622-S	
Q6005	8-729-805-41	TRANSISTOR 2SC3398	
		(RESISTOR)	
R101	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R102	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R103	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R104	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R105	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R106	1-216-058-00	METAL GLAZE 2.4K 5% 1/10W	
R107	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R108	1-216-043-00	METAL CHIP 560 5% 1/10W	
R109	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R110	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R111	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R112	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R113	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R114	1-216-068-00	METAL CHIP 6.2K 5% 1/10W	
R115	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R116	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R117	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R118	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R119	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R120	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R121	1-216-295-00	METAL CHIP 0 5% 1/10W	
R201	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R202	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R203	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R204	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R205	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R206	1-216-058-00	METAL GLAZE 2.4K 5% 1/10W	
R207	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R208	1-216-043-00	METAL CHIP 560 5% 1/10W	

MAIN PANEL PIN JACK POWER

Ref. No.	Part No.	Descriptiion				Remark
R209	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R210	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R211	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R212	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R213	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R214	1-216-068-00	METAL CHIP	6.2K	5%	1/10W	
R215	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R216	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R217	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R218	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R219	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R220	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R221	1-216-295-00	METAL CHIP	0	5%	1/10W	
R351	1-216-029-00	METAL CHIP	150	5%	1/10W	
R352	1-216-033-00	METAL CHIP	220	5%	1/10W	
R353	1-216-037-00	METAL CHIP	330	5%	1/10W	
R354	1-216-041-00	METAL CHIP	470	5%	1/10W	
R355	1-216-045-00	METAL CHIP	680	5%	1/10W	
R356	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R357	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R359	1-216-045-00	METAL CHIP	680	5%	1/10W	
R362	1-216-041-00	METAL CHIP	470	5%	1/10W	
R363	1-216-045-00	METAL CHIP	680	5%	1/10W	
R364	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R365	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R366	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R367	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R368	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R369	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R372	1-216-031-00	METAL CHIP	180	5%	1/10W	
R374	1-216-031-00	METAL CHIP	180	5%	1/10W	
R375	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R376	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R377	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R378	1-216-025-00	METAL CHIP	100	5%	1/10W	
R379	1-216-025-00	METAL CHIP	100	5%	1/10W	
R380	1-216-025-00	METAL CHIP	100	5%	1/10W	
R381	1-216-025-00	METAL CHIP	100	5%	1/10W	
R401	1-216-049-00	METAL CHIP	1K	5%	1/10W	(H3600)
R402	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R403	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R404	1-216-041-00	METAL CHIP	470	5%	1/10W	(H3600)
R405	1-216-041-00	METAL CHIP	470	5%	1/10W	
R407	1-216-115-00	METAL CHIP	560K	5%	1/10W	(H3600)
R408	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R409	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R410	1-216-115-00	METAL CHIP	560K	5%	1/10W	(H3600)
R411	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R413	1-216-295-00	METAL CHIP	0	5%	1/10W	(H3600)
R414	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R415	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R417	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R418	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R419	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R420	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R421	1-216-001-00	METAL CHIP	10	5%	1/10W	
R422	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R423	1-216-041-00	METAL CHIP	470	5%	1/10W	
R425	1-216-025-00	METAL CHIP	100	5%	1/10W	
R426	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R427	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R428	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R429	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R430	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R434	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R435	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R436	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R437	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R439	1-216-295-00	METAL CHIP	0	5%	1/10W	
R440	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R441	1-216-295-00	METAL CHIP	0	5%	1/10W	
R442	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R450	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R451	1-216-049-00	METAL CHIP	1K	5%	1/10W	(H3600)
R452	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R453	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R454	1-216-041-00	METAL CHIP	470	5%	1/10W	(H3600)
R455	1-216-041-00	METAL CHIP	470	5%	1/10W	
R457	1-216-115-00	METAL CHIP	560K	5%	1/10W	(H3600)
R458	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R459	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R460	1-216-115-00	METAL CHIP	560K	5%	1/10W	(H3600)
R461	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R463	1-216-295-00	METAL CHIP	0	5%	1/10W	(H3600)
R464	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R465	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R467	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R468	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R469	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R470	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R471	1-216-001-00	METAL CHIP	10	5%	1/10W	
R472	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R473	1-216-041-00	METAL CHIP	470	5%	1/10W	
R475	1-216-025-00	METAL CHIP	100	5%	1/10W	
R476	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R477	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R478	1-216-089-00	METAL CHIP	47K	5%	1/10W	(H3600)
R479	1-216-089-00	METAL CHIP	47K	5%	1/10W	(H3600)
R480	1-216-089-00	METAL CHIP	47K	5%	1/10W	(H2600)
R493	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R494	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R495	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R496	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R500	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R501	1-216-033-00	METAL CHIP	220	5%	1/10W	
R502	1-216-041-00	METAL CHIP	470	5%	1/10W	
R503	1-216-041-00	METAL CHIP	470	5%	1/10W	
R504	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R505	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R601	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R602	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R603	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R605	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R606	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R607	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R608	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R609	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R610	1-216-082-00	METAL GLAZE	24K	5%	1/10W	
R611	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R612	1-216-081-00	METAL CHIP	22K	5%	1/10W	

MAIN PANEL PIN JACK POWER

Ref. No.	Part No.	Descriptiion	Remark
R613	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R614	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R615	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R616	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R617	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R618	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R619	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R620	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R621	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R623	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R624	1-216-039-00	METAL CHIP 390 5% 1/10W	
R625	1-216-064-00	METAL CHIP 4.3K 5% 1/10W	
R626	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R628	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R629	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R630	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R631	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R634	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R635	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R636	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R637	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R638	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R639	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R640	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R641	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R642	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R643	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R644	1-216-025-00	METAL CHIP 100 5% 1/10W	
R645	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R646	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R647	1-216-025-00	METAL CHIP 100 5% 1/10W	
R648	1-216-025-00	METAL CHIP 100 5% 1/10W	
R649	1-216-025-00	METAL CHIP 100 5% 1/10W	
R650	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R651	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R652	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R653	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R654	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R655	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R656	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R661	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R662	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R663	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R664	1-216-045-00	METAL CHIP 680 5% 1/10W	
R665	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R666	1-216-045-00	METAL CHIP 680 5% 1/10W	
R667	1-216-025-00	METAL CHIP 100 5% 1/10W	
R668	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R669	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R670	1-216-084-00	METAL GLAZE 30K 5% 1/10W	
R671	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R672	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R673	1-216-080-00	METAL CHIP 20K 5% 1/10W	
R674	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R675	1-216-080-00	METAL CHIP 20K 5% 1/10W	
R676	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R677	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R678	1-216-084-00	METAL GLAZE 30K 5% 1/10W	
R679	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R680	1-216-090-00	METAL CHIP 51K 5% 1/10W	

Ref. No.	Part No.	Descriptiion	Remark
R681	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R682	1-216-025-00	METAL CHIP 100 5% 1/10W	
R686	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R687	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R690	1-216-025-00	METAL CHIP 100 5% 1/10W	
R691	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R692	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R693	1-216-025-00	METAL CHIP 100 5% 1/10W	
R696	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R699	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R700	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R5001	1-216-025-00	METAL CHIP 100 5% 1/10W	
R5002	1-216-025-00	METAL CHIP 100 5% 1/10W	
R6001	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R6004	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R6005	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R6010	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R6011	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6012	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6013	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6014	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6015	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6016	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6017	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6018	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
		(VARIABLE RESISTOR)	
RV101	1-238-547-11	RES, ADJ, CARBON 10K	
RV201	1-238-547-11	RES, ADJ, CARBON 10K	
		(SWITCH)	
S901	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)	
S902	1-554-303-21	SWITCH, TACTILE (⏩)	
S903	1-554-303-21	SWITCH, TACTILE (⏪)	
S904	1-554-303-21	SWITCH, TACTILE (● REC)	
S905	1-554-303-21	SWITCH, TACTILE (DECK B)	
S906	1-554-303-21	SWITCH, TACTILE (DECK A)	
S907	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)	
S908	1-554-303-21	SWITCH, TACTILE (DOLBY NR)	
S909	1-554-303-21	SWITCH, TACTILE (DUBBING MODE)	
S910	1-554-303-21	SWITCH, TACTILE (■)	
S911	1-554-303-21	SWITCH, TACTILE (◁)	
S912	1-554-303-21	SWITCH, TACTILE (▷)	
S913	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)	
S914	1-554-303-21	SWITCH, TACTILE (○ MUTE)	
S915	1-554-303-21	SWITCH, TACTILE (DIRECTION MODE)	
		(TRANSFORMER)	
T601	1-450-458-11	TRANSFORMER, DC-DC CONVERTER	
		(TEST PIN)	
TP601	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
TP6001	* 1-564-517-11	PLUG, CONNECTOR 2P	
		(CRYSTAL)	
X401	1-577-077-11	OSCILLATOR, CERAMIC 400KHz	
X601	1-577-358-21	VIBRATOR, CERAMIC 4MHz	
X951	1-577-101-11	VIBRATOR, CERAMIC 4.19MHz	

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LEAF SW(A) MD-A LEAF SW(B)

Ref. No.	Part No.	Descriptiion	Remark
	* 1-634-841-11	LEAF SW(A)BOARD	
		***************	
	3-343-419-01	HOLDER (S SENSOR A)	
		(CONNECTOR)	
CNP81	* 1-568-852-11	SOCKET, CONNECTOR 9P	
		(IC)	
IC81A	8-719-710-03	IC PHOTO REFLECTOR NJL5165K-B	
		(RESISTOR)	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		(SWITCH)	
S81	1-571-958-11	SWITCH, PUSH (1 KEY)(A. STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (A. CrO2 DET)	
S86	1-571-281-21	SWITCH, LEAF (A. HALF DET)	

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Ref. No.	Part No.	Descriptiion	Remark
	* A-2006-399-A	MD-A BOARD	
		**********	
		(CAPACITOR)	
C11	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C12	1-136-157-00	FILM 0.022uF 5% 50V	
C13	1-124-234-00	ELECT 22uF 20% 16V	
C18	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C21	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C22	1-136-157-00	FILM 0.022uF 5% 50V	
C23	1-124-234-00	ELECT 22uF 20% 16V	
C28	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C31	1-124-234-00	ELECT 22uF 20% 16V	
C32	1-124-234-00	ELECT 22uF 20% 16V	
C71	1-164-346-11	CERAMIC CHIP 1uF 16V	
		(CONNECTOR)	
CNJ31	* 1-580-782-11	SOCKET, CONNECTOR	
CNP32	* 1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
CNP71	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP72	* 1-580-411-11	SOCKET, CONNECTOR 4P	
		(IC)	
IC31A	8-759-970-66	IC LM833M	
		(JUMPER)	
JW1	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW51	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW52	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW53	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW54	1-216-296-00	METAL CHIP 0 5% 1/8W	
		(TRANSISTOR)	
Q71A	8-729-602-36	TRANSISTOR 2SA1602	
		(RESISTOR)	
R11	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R12	1-216-025-00	METAL CHIP 100 5% 1/10W	
R13	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R14	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R21	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R22	1-216-025-00	METAL CHIP 100 5% 1/10W	
R23	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R24	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R31	1-216-033-00	METAL CHIP 220 5% 1/10W	
R32	1-216-033-00	METAL CHIP 220 5% 1/10W	
R71	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R72	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R73	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R74	1-216-089-00	METAL CHIP 47K 5% 1/10W	
		(VARIABLE RESISTOR)	
RV11A	1-238-012-11	RES, ADJ, CARBON 1K	
RV21A	1-238-012-11	RES, ADJ, CARBON 1K	
RV71A	1-238-016-11	RES, ADJ, CARBON 10K	
RV72A	1-238-016-11	RES, ADJ, CARBON 10K	

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Ref. No.	Part No.	Descriptiion	Remark
	* 1-634-841-11	LEAF SW(B) BOARD	
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	3-343-419-01	HOLDER (S SENSOR A)	
		(CONNECTOR)	
CNP81	* 1-568-852-11	SOCKET, CONNECTOR 9P	
		(IC)	
IC81B	8-719-710-03	IC PHOTO REFLECTOR NJL5165K-B	
		(RESISTOR)	
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		(SWITCH)	
S81	1-571-958-11	SWITCH, PUSH (1 KEY)(B. STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (B. CrO2 DET)	
S83	1-571-281-21	SWITCH, LEAF (B. METAL DET)	
S84	1-571-281-21	SWITCH, LEAF (B. ERASE PROOF SIDE A	
S85	1-571-281-21	SWITCH, LEAF (B. ERASE PROOF SIDE B	
S86	1-571-281-21	SWITCH, LEAF (B. HALF DET)	

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MD-B

Ref. No.	Part No.	Descriptiion				Remark
	* A-2006-400-A	MD-B BOARD **********				
		(CAPACITOR)				
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C12	1-136-157-00	FILM	0.022uF	5%	50V	
C13	1-124-234-00	ELECT	22uF	20%	16V	
C14	1-136-273-91	FILM	75PF	5%	630V	
C15	1-164-080-11	CERAMIC	390PF	10%	50V	
C17	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C22	1-136-157-00	FILM	0.022uF	5%	50V	
C23	1-124-234-00	ELECT	22uF	20%	16V	
C24	1-136-273-91	FILM	75PF	5%	630V	
C25	1-164-080-11	CERAMIC	390PF	10%	50V	
C27	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C31	1-124-234-00	ELECT	22uF	20%	16V	
C32	1-124-234-00	ELECT	22uF	20%	16V	
C33	1-124-234-00	ELECT	22uF	20%	16V	
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C52	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C53	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V	
C54	1-136-559-11	FILM	0.0047uF	5%	630V	
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C57	1-164-346-11	CERAMIC CHIP	1uF		16V	
C58	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C71	1-164-346-11	CERAMIC CHIP	1uF		16V	
		(CONNECTOR)				
CNJ31	* 1-580-782-11	SOCKET, CONNECTOR				
CNJ33	* 1-580-782-11	SOCKET, CONNECTOR				
CNP32	* 1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P				
CNP71	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P				
CNP72	* 1-580-411-11	SOCKET, CONNECTOR 4P				
		(DIODE)				
D31	8-719-988-62	DIODE 1SS355				
		(IC)				
IC31B	8-759-970-66	IC LM833M				
		(JUMPER)				
JW1	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW3	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW4	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW5	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW6	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW7	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW55	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW56	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW57	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW58	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW59	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW61	1-216-296-00	METAL CHIP	0	5%	1/8W	
		(COIL)				
L11	1-410-780-11	INDUCTOR	27mH			
L21	1-410-780-11	INDUCTOR	27mH			
		(TRANSISTOR)				
Q51	8-729-808-01	TRANSISTOR	2SD1622-S			
Q52	8-729-808-01	TRANSISTOR	2SD1622-S			
Q53	8-729-808-01	TRANSISTOR	2SD1622-S			
Q71B	8-729-602-36	TRANSISTOR	2SA1602			
		(RESISTOR)				
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R12	1-216-025-00	METAL CHIP	100	5%	1/10W	
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W	
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R15	⚠ 1-249-430-11	CARBON	12K	5%	1/4W	
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R22	1-216-025-00	METAL CHIP	100	5%	1/10W	
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W	
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R25	⚠ 1-249-430-11	CARBON	12K	5%	1/4W	
R31	1-216-033-00	METAL CHIP	220	5%	1/10W	
R32	1-216-033-00	METAL CHIP	220	5%	1/10W	
R41	⚠ 1-249-393-11	CARBON	10	5%	1/4W	
R42	⚠ 1-249-393-11	CARBON	10	5%	1/4W	
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W	
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W	
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W	
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W	
		(VARIABLE RESISTOR)				
RV11B	1-238-012-11	RES, ADJ, CARBON 1K				
RV12	1-238-551-11	RES, ADJ, CARBON 220K				
RV21B	1-238-012-11	RES, ADJ, CARBON 1K				
RV22	1-238-551-11	RES, ADJ, CARBON 220K				
RV71B	1-238-016-11	RES, ADJ, CARBON 10K				
RV72B	1-238-016-11	RES, ADJ, CARBON 10K				
		(RELAY)				
RY31	1-515-726-11	RELAY				
		(COIL)				
T51	1-406-419-11	COIL, BIAS OSCILLATION				

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Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Descriptiion	Remark
		MISCELLANEOUS *************	
117	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
HP101	A-2003-868-B	BASE ASSY, HEAD (DECK A)	
HRP101	A-2003-838-A	BASE ASSY, HEAD (DECK B)	
M101A	A-2003-474-A	MOTOR (REEL MOTOR) ASSY (DECK A)	
M101B	A-2003-474-A	MOTOR (REEL MOTOR) ASSY (DECK B)	
M102A	X-3359-417-1	MOTOR (CAPSTAN MOTOR) ASSY (DECK A)	
M102B	X-3359-417-1	MOTOR (CAPSTAN MOTOR) ASSY (DECK B)	

****

HARDWARE LIST

****

# 1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
# 2	7-621-255-15	SCREW +PTT 2X3 (S)	
# 3	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
# 4	7-621-770-67	SCREW +PTT 2.6X6 (S)	
# 5	7-627-556-08	SCREW +P 2.6X2.8	
# 6	7-621-775-00	SCREW +B 2.6X3	
# 7	7-682-548-04	+BVTT 3X8 (S)	

Sony Corporation
Audio Group

English
91D1695-1
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Published by Customer Relations and Service Group

TC-H2600/H3600

SONY®
SERVICE MANUAL

4205

AEP Model
UK Model
E Model
Australian Model
TC-H2600
TC-H3600
US Model
Canadian Model
TC-H3600

CORRECTION-1

Correct your service manual as shown below.

☞ : indicates corrected portion.

Page	INCORRECT			CORRECT		
	No.	Part No.	Description	No.	Part No.	Description
36	165	X-3359-415-1	CHASSIS ASSY, MECHANICAL	165	X-3363-790-1 ☞	CHASSIS ASSY, MECHANICAL

9-956-353-91

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TC-H2600/H3600

SONY®
SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
TC-H2600
TC-H3600
US Model
Canadian Model
TC-H3600

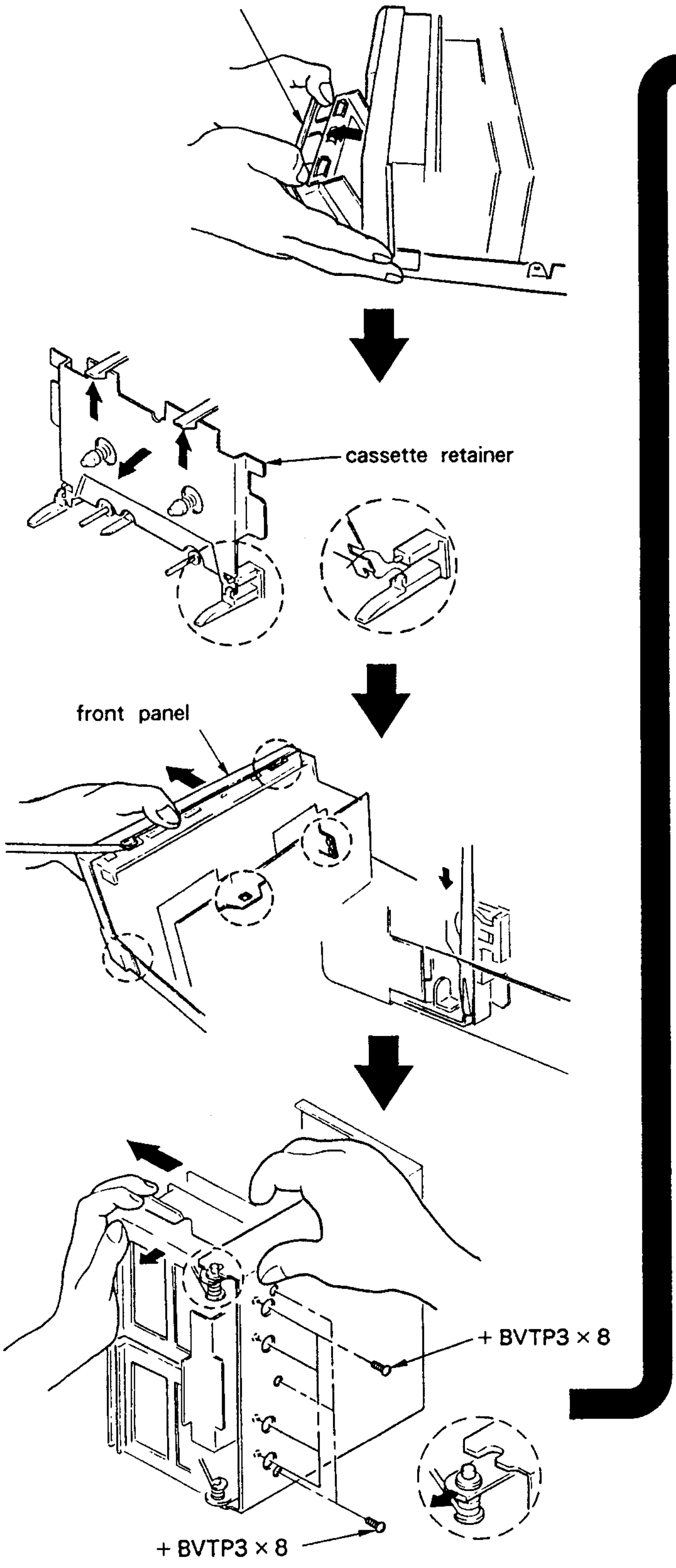
SUPPLEMENT-1

File this supplement with service manual.

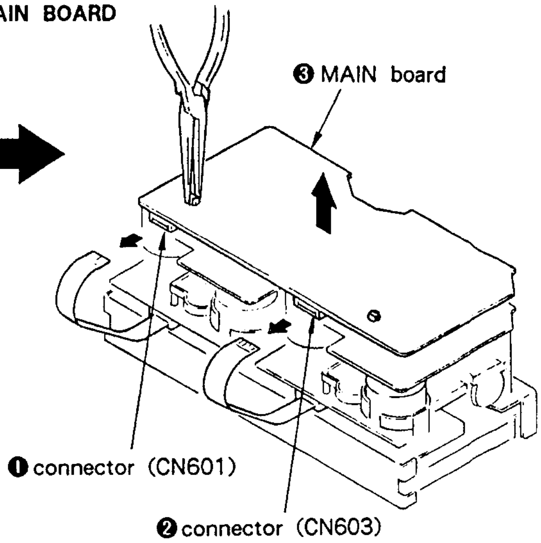
Subject : Disassembly

NOTE : Follow the disassembly procedure in the numerical order given.

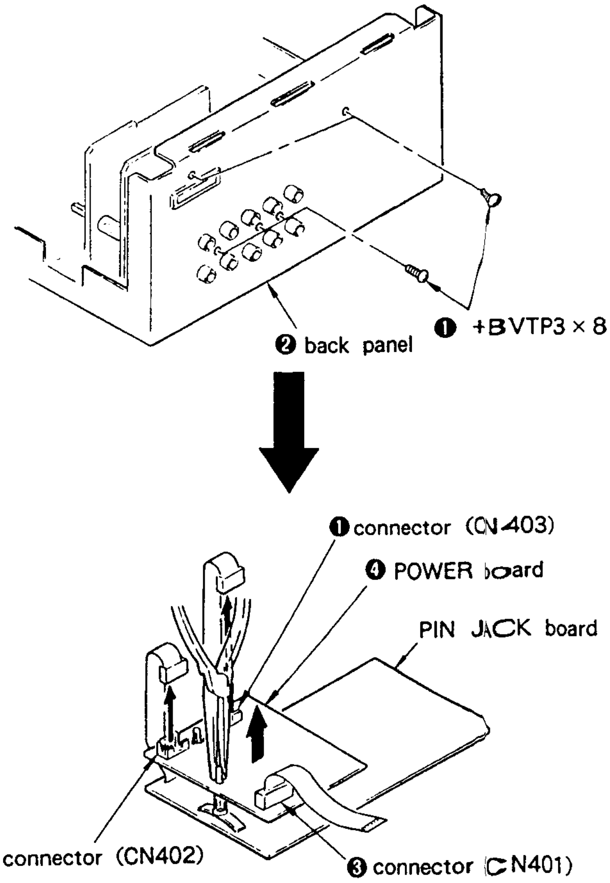
- **FRONT PANEL**


cassette lid
cassette retainer
front panel
+ BVTP3 × 8
+ BVTP3 × 8

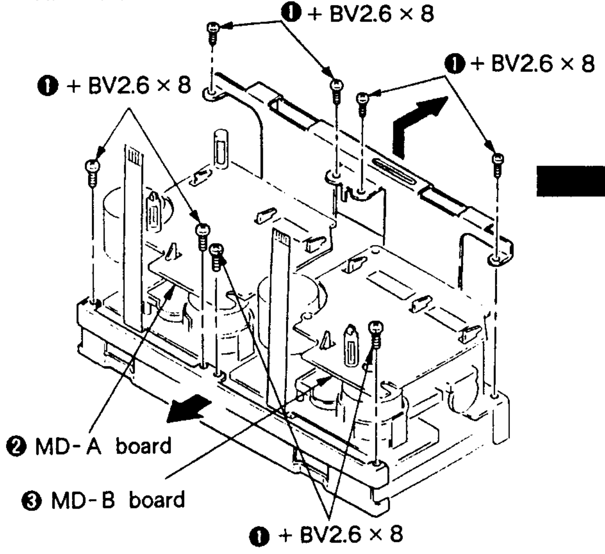
- **MAIN BOARD**


❸ MAIN board
❶ connector (CN601)
❷ connector (CN603)

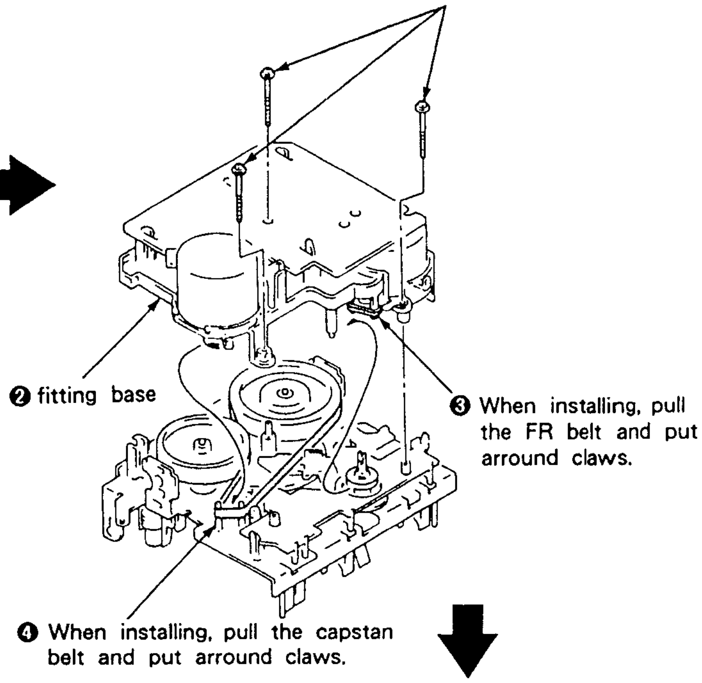
- **PIN JACK/POWER BOARD**

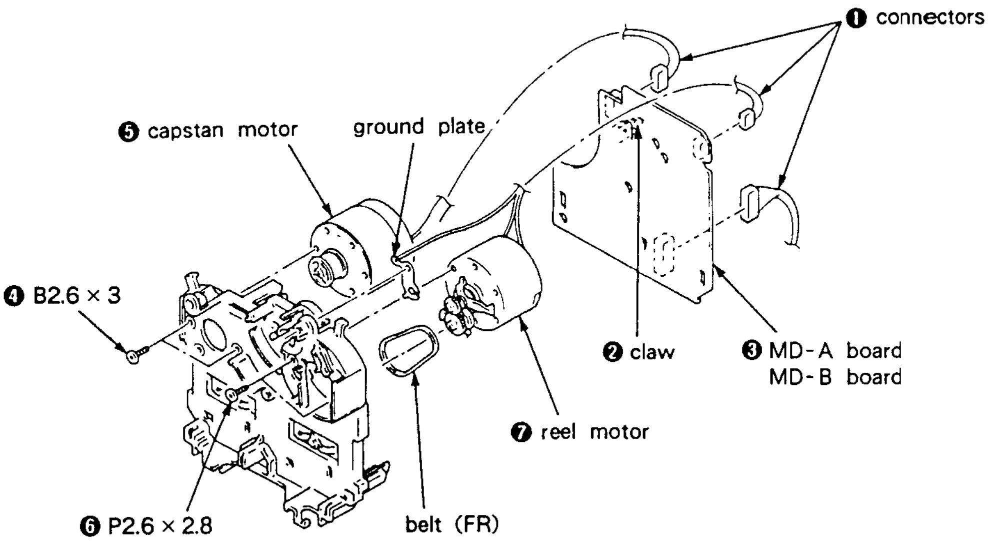

❶ +BVTP3 × 8
❷ back panel
❶ connector (CN403)
❹ POWER board
PIN JACK board
❷ connector (CN402)
❸ connector (CN401)

• MECHANISM DECK

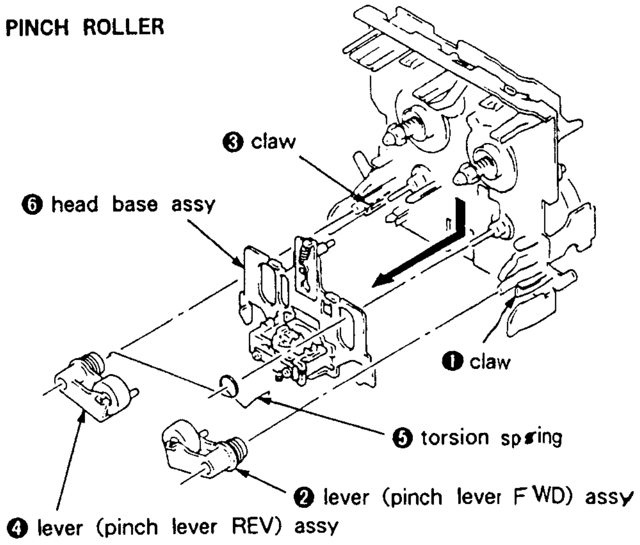

❶ + BV2.6 × 8
❶ + BV2.6 × 8
❶ + BV2.6 × 8
❷ MD-A board
❸ MD-B board
❶ + BV2.6 × 8

• CAPSTAN/REEL MOTOR


❶ PTPWH2 × 23
❷ fitting base
❸ When installing, pull the FR belt and put arround claws.
❹ When installing, pull the capstan belt and put arround claws.


❶ connectors
❺ capstan motor
ground plate
❹ B2.6 × 3
❷ claw
❸ MD-A board
MD-B board
❼ reel motor
❻ P2.6 × 2.8
belt (FR)

• HEAD, PINCH ROLLER


❸ claw
❻ head base assy
❶ claw
❺ torsion spring
❷ lever (pinch lever FWD) assy
❹ lever (pinch lever REV) assy

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English
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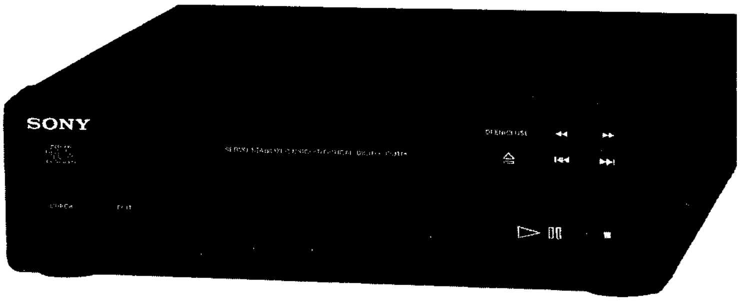
V13727

CDP-H3600

SERVICE MANUAL

AEP Model
UK Model



This set is the CD player section in MHC-2600/3600

Model Name Using Similar Mechanism	CDP-H300
CD Mechanism Type	CDM13B-5BD3
Base Unit Name	BU-5BD3

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3-3. Printing Wiring Boards 10
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(3) Optical Pick-Up Block 22

5. ELECTRICAL PARTS LIST 23

SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Signal to noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (at 1 kHz)
Channel separation	More than 90 dB
Output level	2 V (at 50 kilohms)
Load impedance	More than 10 kilohms
Outputs	DIGITAL OUT OPTICAL (optical output connector): wave length 660 nm, output level –18 dBm

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

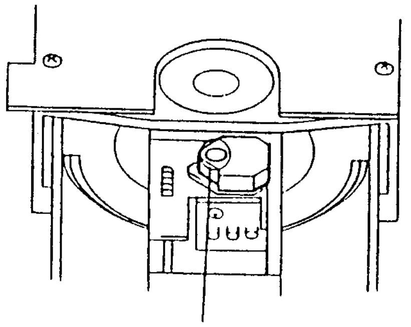
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

COMPACT DISC PLAYER

SONY®

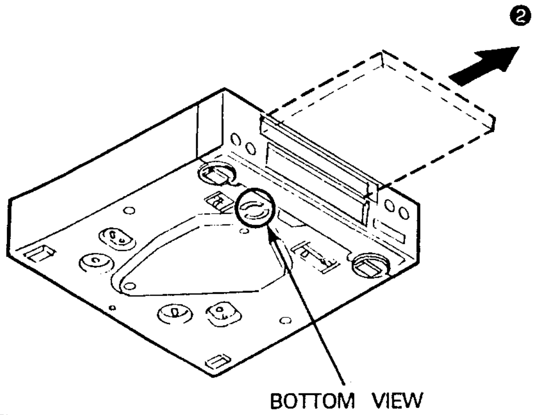
LASER DIODE AND FOCUS SERCH OPERATION CHECK

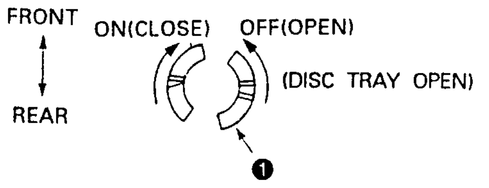
1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



❶ Confirm that laser beam is spread.
❷ Up and down motion of the objective lens. (3 times)

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF





(1) Insert to ❶ for tapering driver, etc., and turn in the direction of arrow OFF. (Disc tray open)
(2) Tray as come out little of front panel, pull out in the direction of arrow ❷ by hand.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective sureface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

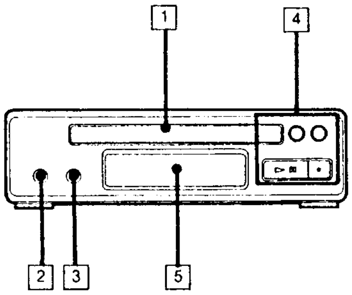
LOCATION OF CONTROLS

This section is extracted from instruction manual.

CD Player Section D

1 Disc tray
2 CHECK button
3 EDIT/TIME FADE button
4 CD operation buttons
  ⏏ : OPEN/CLOSE
  ▷II : Play/pause
  ◀◀ I◁◁ ▷▷I ▶▶ : Manual search (when kept depressed)/Automatic Music Sensor (when pressed)
5 Display window

D



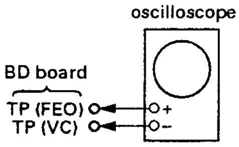
SECTION 2

ELECTRICAL BLOCK CHECKING

Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

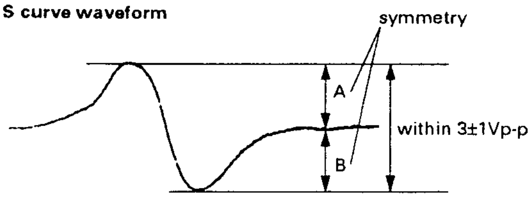
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

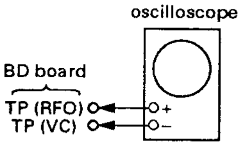
S curve waveform



5. After check, remove the lead wire connected in step 2.

Note :
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

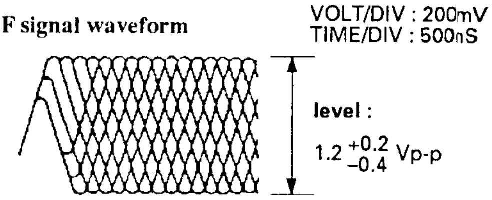


Procedure :

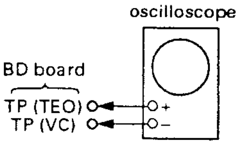
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :
Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

RF signal waveform



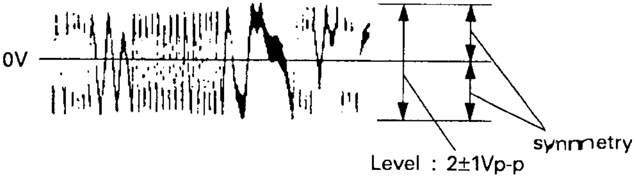
E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) toTP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level

Traverse oscilloscope



6. Remove the lead wire connected in step 1.

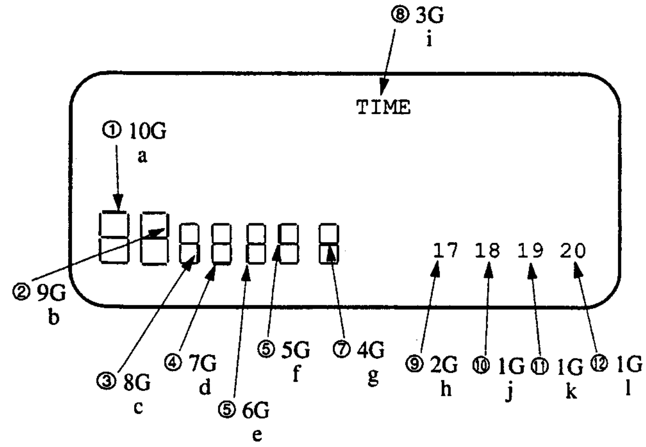
[TEST MODES]

1. Test mode of display micon (IC401)

Connect Pin ㉝ of IC401 to ground and turn ON the POWER switch, thus you can test the following 3 tests.

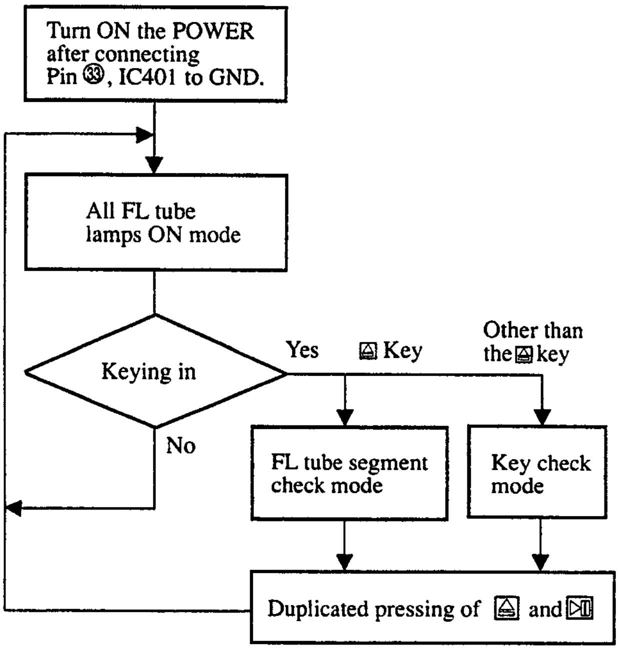
(1) All FL tube ON
This mode is actuated immediately after turning ON the POWER switch.

(2) FL tube segment check
This mode is actuated by pressing the ⏏ key in the state of (1). Every time the ⏏ key is pressed, the segments are indicated sequentially from the segment a. When the last l segment is displayed, keying in is no longer accepted while continuing the lighting-up state of the last segment. Conditions are normal provided all lamps light up in the following order.


⑧ 3G
i
TIME
① 10G
a
② 9G
b
③ 8G
c
④ 7G
d
⑤ 6G
e
⑤ 5G
f
⑦ 4G
g
⑨ 2G
h
⑩ 1G
j
⑪ 1G
k
⑫ 1G
l
17 18 19 20

(3) KEY check
This mode is effected by pressing the ⏏ key in the state of (1), while indicating "1." Every time a new key is pressed subsequently, the indicated number is incremented. Conditions are normal provided "7" is indicated when all types of keys are pressed. Even if a key is pressed again, it is not counted.

* To leave the mode (2) or (3), press the ⏏ and ⏯ keys in duplication, thereby the mode returning to all ON mode.


Turn ON the POWER after connecting Pin ㉝, IC401 to GND.
All FL tube lamps ON mode
Keying in
Yes
⏏ Key
Other than the ⏏ key
No
FL tube segment check mode
Key check mode
Duplicated pressing of ⏏ and ⏯

2. Test Modes of CD Syscon (IC202)

(1) ADJUST mode
When this mode is effected, the machine is operated normally except for the following.

- When pin ⑲, IC202 (ADJ) is set to "L" after turning ON the POWER switch:

1. GFS is no longer monitored during PLAY, PAUSE or SEARCH, while not stopping even with GFS remaining still at "L" (NG).
2. No high-speed feeding is activated during SEARCH.
3. Focus gain is reset to normal gain during PLAY (normally, the gain is lowered to reduce noise when FOCUS is locked).

- When Pin ⑬, IC202 (AFADJ) is set to "L" after turning ON the POWER switch:

1. Regardless of Pin ⑲ (ADJ) of the CLV-S fixed function, the CLV mode during PLAY becomes CLV-S (rough servo) only while Pin e remains "L".

(2) AFADJUST mode
In this mode, it is possible to check the interface between the display micon (IC401) and CD syscon (IC202).

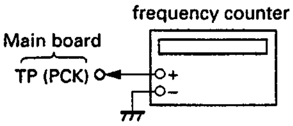
- Set Pin ⑬, IC202 (AFADJ) to "L" before turning ON the POWER switch.

1. Every time the ⏏ key is pressed after turning On the POWER switch, indication on the FL tube is switched correspondingly. Conditions are normal provided the indication repeats the 4 patterns including all lamp ON.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.

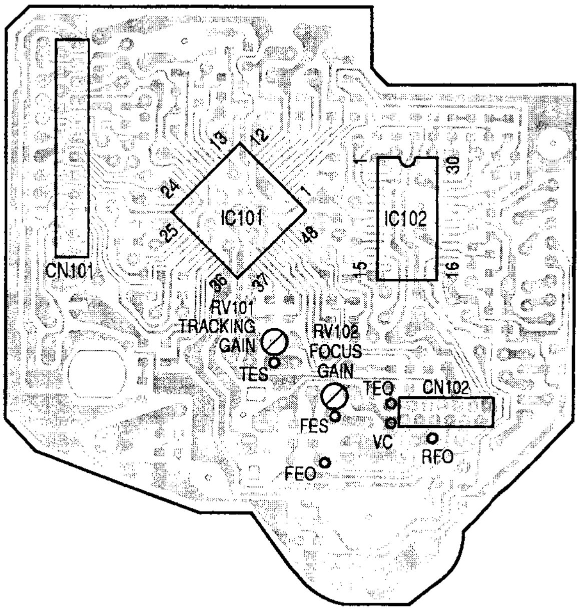

frequency counter
Main board
TP (PCK)
+
−

2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

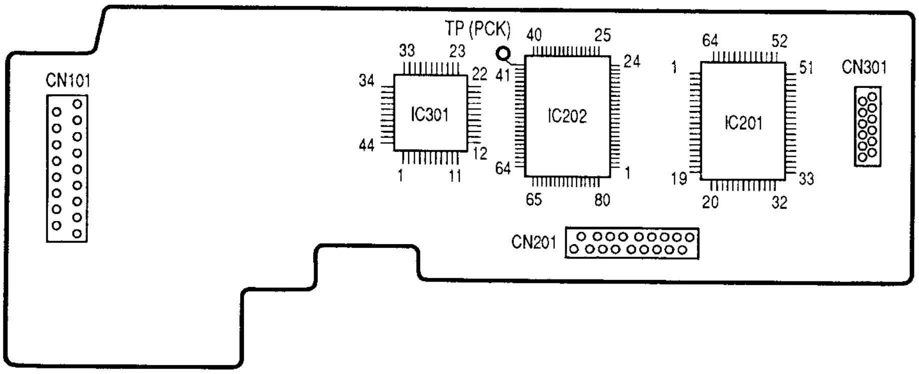
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

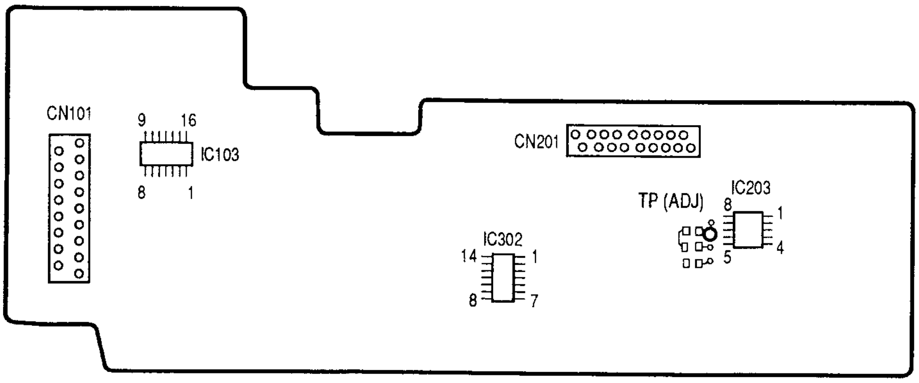
[BD BOARD] – Conductor Side –


CN101
IC101
13
12
24
1
25
48
36
37
IC102
1
30
15
16
RV101
TRACKING
GAIN
TES
RV102
FOCUS
GAIN
TEO
CN102
FES
VC
RFO
FEO

[MAIN BOARD] – Component Side –

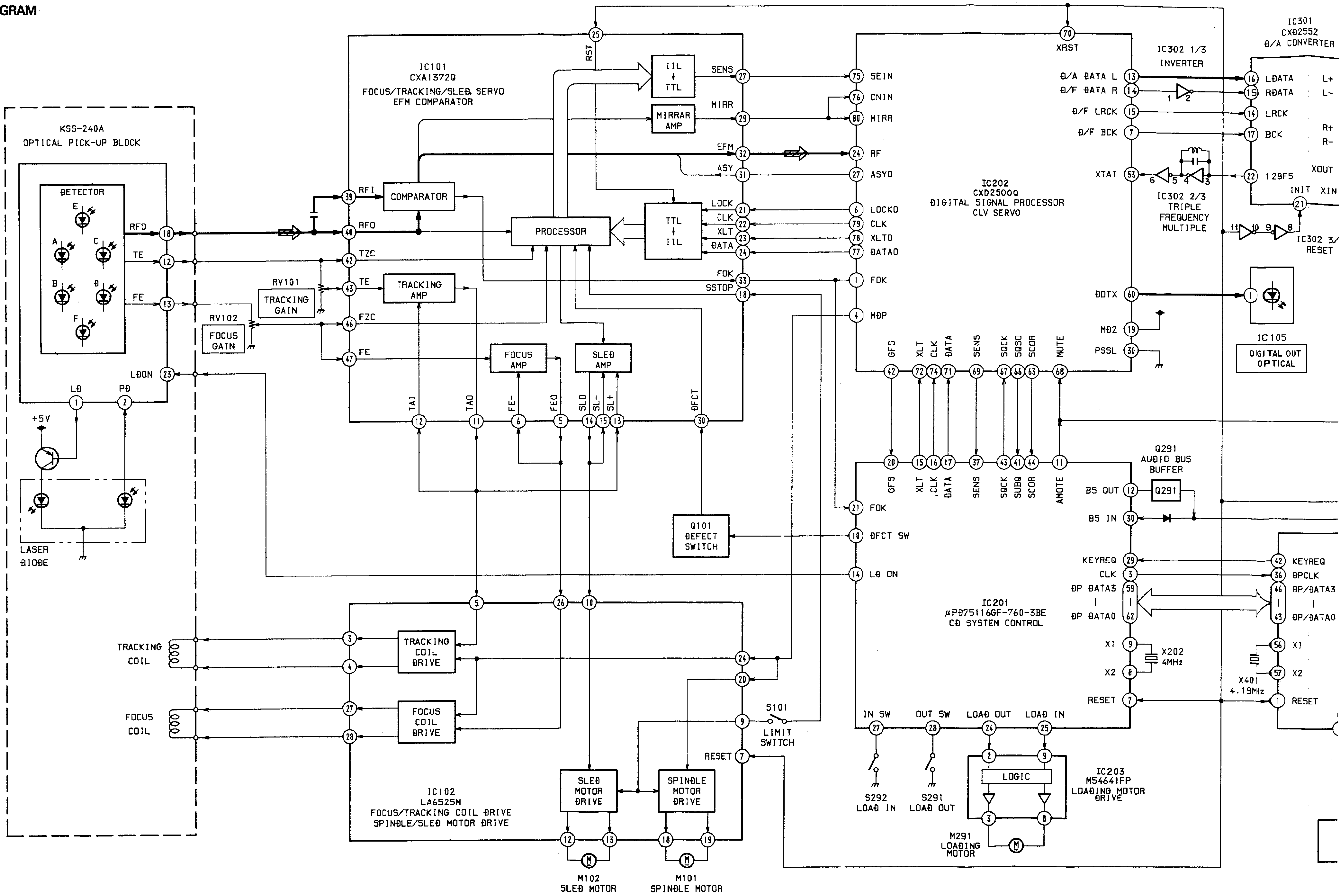

CN101
TP (PCK)
IC301
33
23
22
34
44
12
1
11
IC202
40
25
41
24
64
1
65
80
IC201
64
52
1
51
19
33
20
32
CN301
CN201

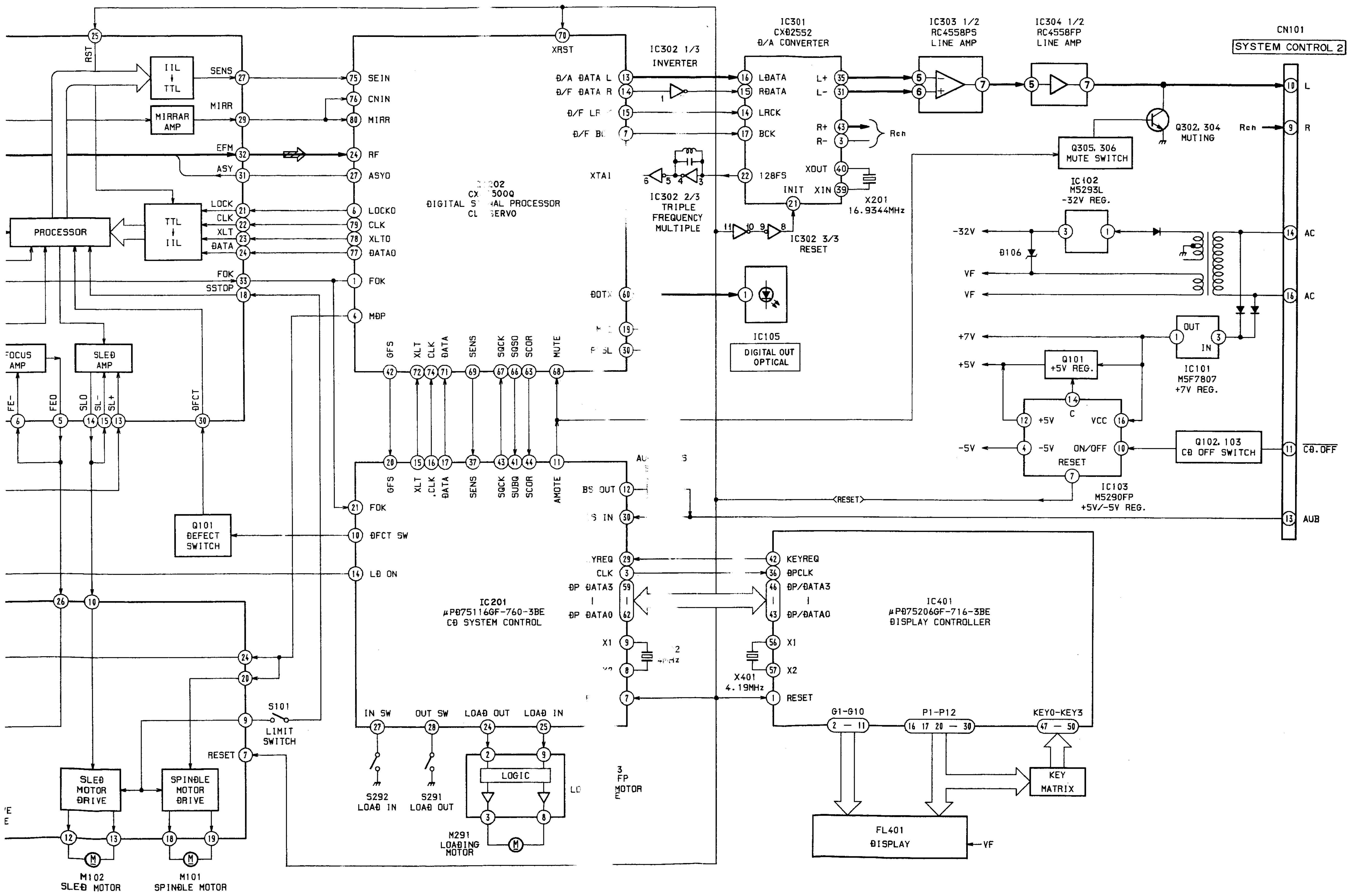
[MAIN BOARD] – Conductor Side –


CN101
9
16
IC103
8
1
CN201
TP (ADJ)
IC203
8
1
5
4
IC302
14
1
8
7

SECTION 3
DIAGRAMS

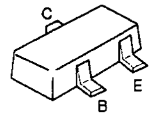
3-1. BLOCK DIAGRAM


KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
E
A
C
B
D
F
RFO
TE
FE
LDON
LD
PD
+5V
LASER
DIODE
TRACKING
COIL
FOCUS
COIL
IC101
CXA1372Q
FOCUS/TRACKING/SLED SERVO
EFM COMPARATOR
RFI
RFO
TZC
TE
FZC
FE
COMPARATOR
TRACKING AMP
FOCUS AMP
SLED AMP
PROCESSOR
IIL ↓ TTL
TTL ↓ IIL
MIRRAR AMP
RST
SENS
MIRR
EFM
ASY
LOCK
CLK
XLT
DATA
FOK
SSTOP
DFCT
TAI
TAO
FE-
FEO
SLO
SL-
SL+
RV101
TRACKING GAIN
RV102
FOCUS GAIN
Q101
DEFECT
SWITCH
IC102
LA6525M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
TRACKING COIL DRIVE
FOCUS COIL DRIVE
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
RESET
S101
LIMIT
SWITCH
M102
SLED MOTOR
M101
SPINDLE MOTOR
IC202
CXD2500Q
DIGITAL SIGNAL PROCESSOR
CLV SERVO
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCKO
CLK
XLTO
DATAO
FOK
MDP
D/A DATA L
D/F DATA R
D/F LRCK
D/F BCK
XTAI
DDTX
MD2
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MUTE
IC302 1/3
INVERTER
IC302 2/3
TRIPLE
FREQUENCY
MULTIPLE
IC302 3/
RESET
IC301
CXD2552
D/A CONVERTER
LDATA
RDATA
LRCK
BCK
128FS
L+
L-
R+
R-
XOUT
INIT
XIN
IC105
DIGITAL OUT
OPTICAL
Q291
AUDIO BUS
BUFFER
BS OUT
BS IN
IC201
µPD75116GF-760-3BE
CD SYSTEM CONTROL
GFS
XLT
.CLK
DATA
SENS
SQCK
SUBQ
SCOR
AMUTE
FOK
DFCT SW
LD ON
KEYREQ
CLK
DP DATA3
DP DATA0
X1
X2
X202
4MHz
RESET
KEYREQ
DPCLK
DP/DATA3
DP/DATA0
X1
X2
X401
4.19MHz
RESET
IN SW
OUT SW
LOAD OUT
LOAD IN
S292
LOAD IN
S291
LOAD OUT
LOGIC
IC203
M54641FP
LOADING MOTOR
DRIVE
M291
LOADING
MOTOR

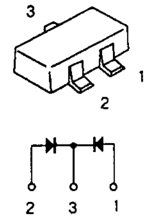

RST
IIL ↓ TTL
SENS
MIRRAR AMP
MIRR
EFM
ASY
PROCESSOR
TTL ↓ IIL
LOCK
CLK
XLT
DATA
FOK
SSTOP
FOCUS AMP
SLED AMP
FE-
FEO
SLO
SL-
SL+
DFCT
Q101 DEFECT SWITCH
SEIN
CNIN
MIRR
RF
ASYO
LOCKO
CLK
XLTO
DATAO
FOK
MDP
XRST
IC202 CXD2500Q DIGITAL SIGNAL PROCESSOR CLV SERVO
D/A DATA L
D/F DATA R
D/F LR
D/F BL
XTAI
DOTX
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MUTE
AMUTE
SUBQ
FOK
DFCT SW
LD ON
BS OUT
BS IN
KYREQ
CLK
DP DATA3
DP DATAO
X1
X2
IC201 µPD75116GF-760-3BE CD SYSTEM CONTROL
IN SW
OUT SW
LOAD OUT
LOAD IN
S292 LOAD IN
S291 LOAD OUT
LOGIC
M291 LOADING MOTOR
FP MOTOR
S101 LIMIT SWITCH
RESET
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
M102 SLED MOTOR
M101 SPINDLE MOTOR
IC302 1/3 INVERTER
IC302 2/3 TRIPLE FREQUENCY MULTIPLE
IC302 3/3 RESET
IC301 CXD2552 D/A CONVERTER
LDATA
RDATA
LRCK
BCK
128FS
INIT
XOUT
XIN
L+
L-
R+
R-
Rch
X201 16.9344MHz
IC105 DIGITAL OUT OPTICAL
IC303 1/2 RC4558PS LINE AMP
IC304 1/2 RC4558FP LINE AMP
Q302, 304 MUTING
Q305, 306 MUTE SWITCH
IC102 M5293L -32V REG.
-32V
D106
VF
VF
+7V
+5V
-5V
Q101 +5V REG.
IC101 M5F7807 +7V REG.
OUT
IN
+5V
VCC
-5V
ON/OFF
RESET
IC103 M5290FP +5V/-5V REG.
Q102, 103 CD OFF SWITCH
RESET
CN101
SYSTEM CONTROL 2
L
R
AC
AC
CD.OFF
AUB
KEYREQ
DPCLK
DP/DATA3
DP/DATAO
X1
X2
X401 4.19MHz
RESET
IC401 µPD75206GF-716-3BE DISPLAY CONTROLLER
G1-G10
P1-P12
KEYO-KEY3
KEY MATRIX
FL401 DISPLAY
VF

3-2. SEMICONDUCTOR LEAD LAYOUTS

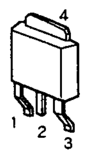
DTC144EK
2SA1162-G
2SC3052-EF
2SC3624A-L15



MA152WK

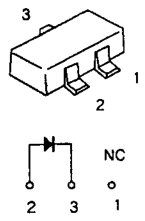


2SA1341
2SB1122-S

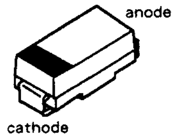


1 : BASE
2 : COLLECTOR
3 : EMITTER
4 : COLLECTOR

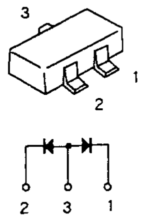
RD4.7M-B3
RD6.8M-B2
RD8.2M-B3



EC10DS2
EC10QS-04


anode
cathode

1S2836



• SEMICONDUCTOR LOCATION

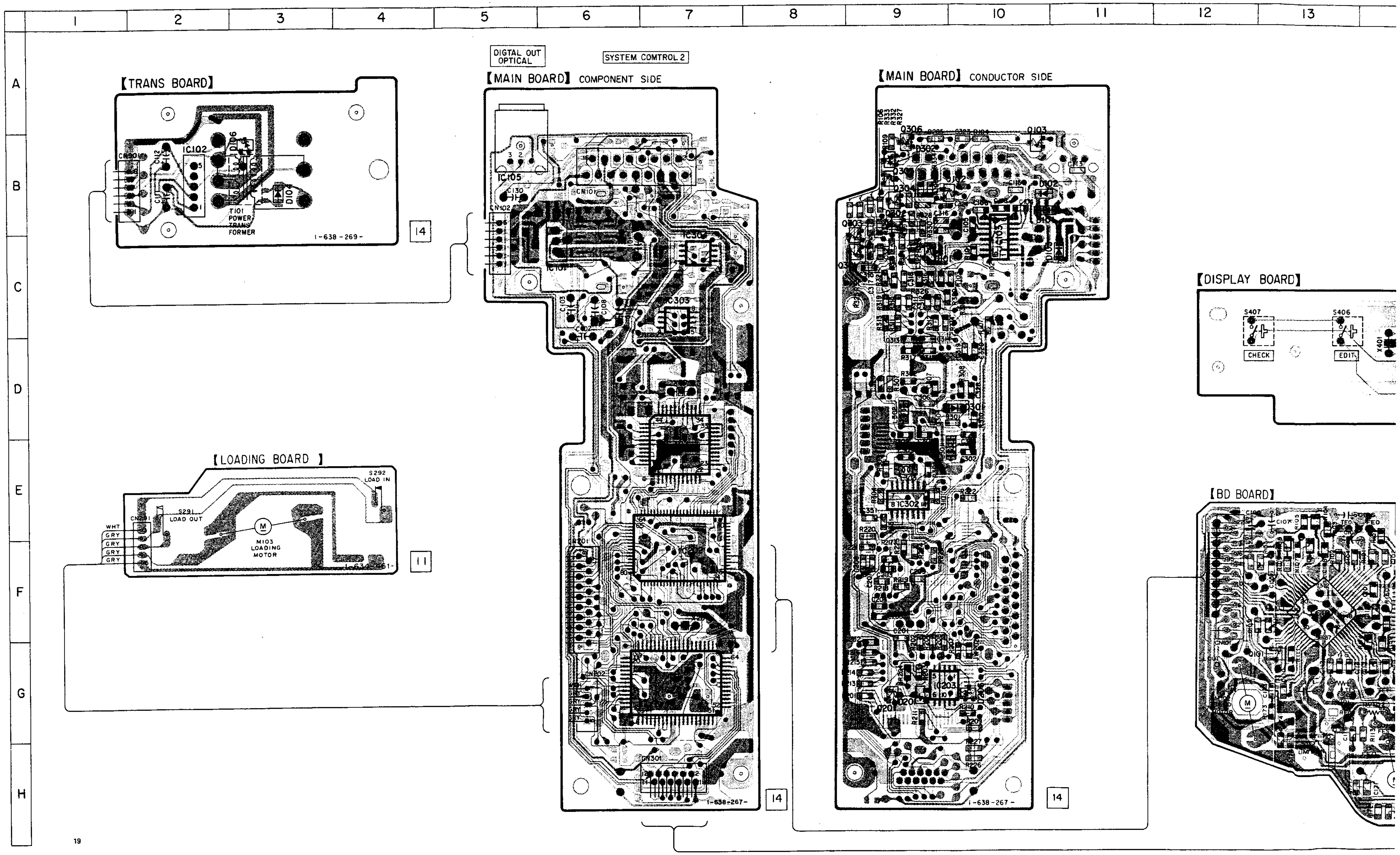
BD BOARD

Ref. No.	LOCATION
Q101	F-13
IC101	F-13
IC102	F-14

EXCEPT BD BOARD

Ref. No.	LOCATION
D101	B-10
D102	B-10
D103	C-11
D201	G-9
D206	G-10
D301	D-9
D302	B-9
D401	D-17
D402	D-19
D403	D-15
IC101	C-6
IC102	B-2
IC103	C-10
IC105	B-5
IC201	G-7
IC202	F-7
IC203	G-9
IC301	E-7
IC302	E-9
IC303	C-7
IC304	C-7
IC401	D-15
Q101	C-9
Q102	B-9
Q103	B-10
Q201	G-9
Q301	C-9
Q302	B-9
Q303	C-9
Q304	B-9
Q305	B-9
Q306	B-9

3-3. PRINTED WIRING BOARDS


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
【TRANS BOARD】
IC102
CN901
D106
D107
T101 POWER TRANS FORMER
1-638-269-
14
DIGTAL OUT OPTICAL
SYSTEM COMTROL 2
【MAIN BOARD】 COMPONENT SIDE
IC105
CN102
CN107
IC101
IC303
IC304
CN301
1-638-267-
14
【MAIN BOARD】 CONDUCTOR SIDE
Q306
Q302
Q103
D102
IC302
IC203
1-638-267-
14
【DISPLAY BOARD】
S407
S406
CHECK
EDIT
X401
【LOADING BOARD】
S292 LOAD IN
S291 LOAD OUT
CN291
WHT
GRY
GRY
GRY
GRY
M103 LOADING MOTOR
11
【BD BOARD】
19

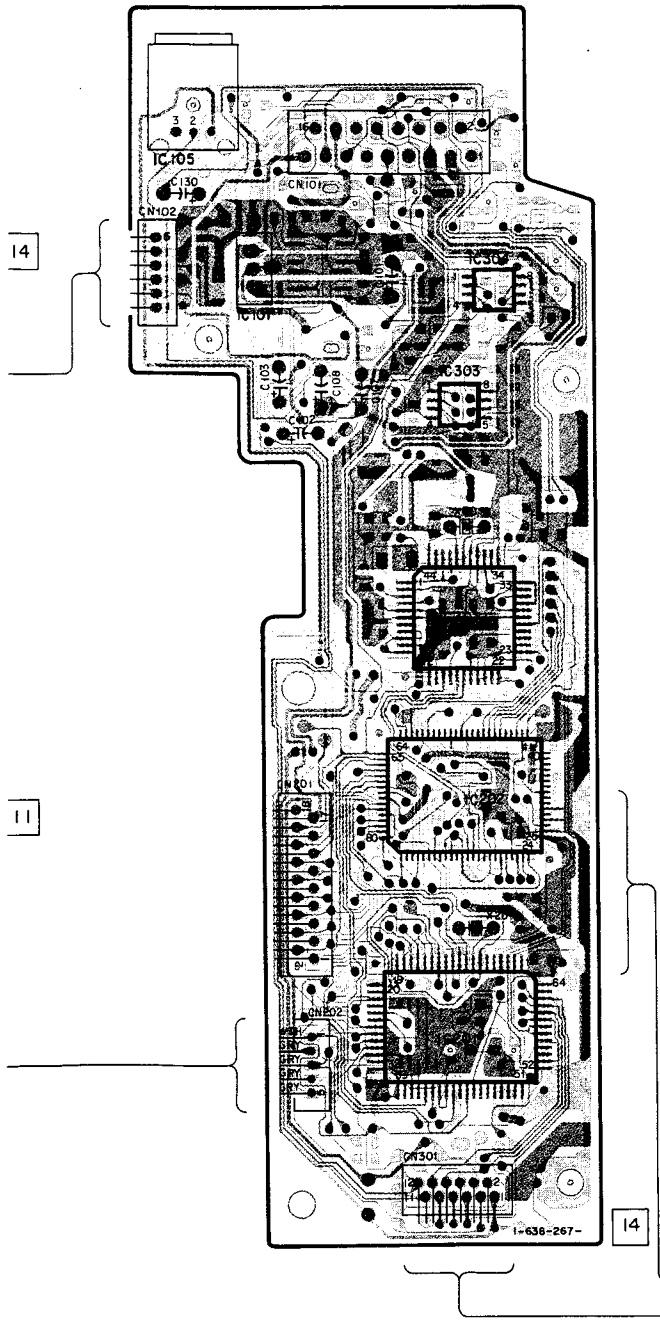
Note:
- ○—— : indicated a lead wire mounted on the component side.
- ●—— : indicated a lead wire mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

DIGTAL OUT OPTICAL

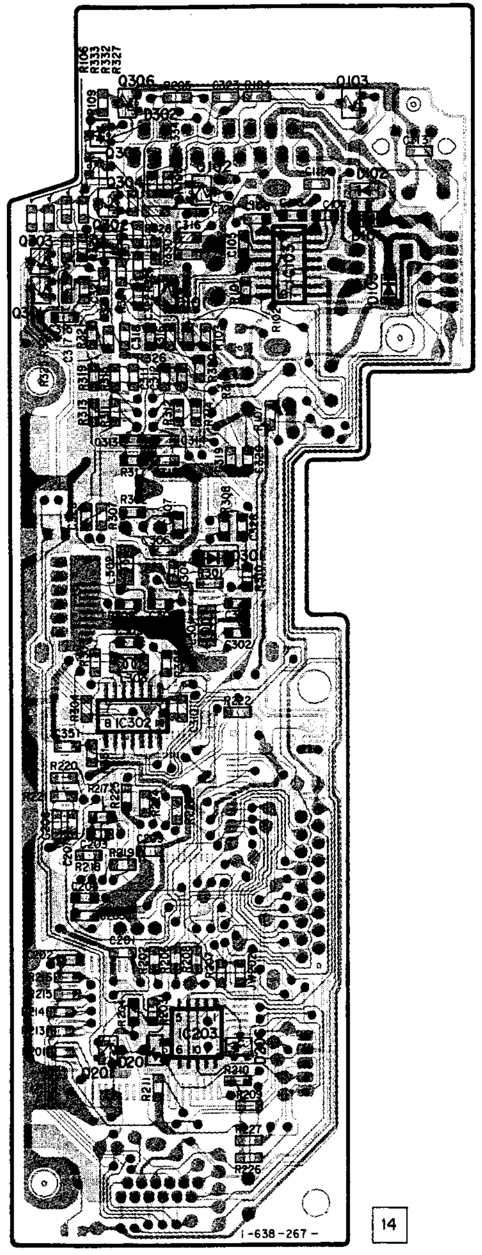
SYSTEM COMTROL 2

【MAIN BOARD】 COMPONENT SIDE



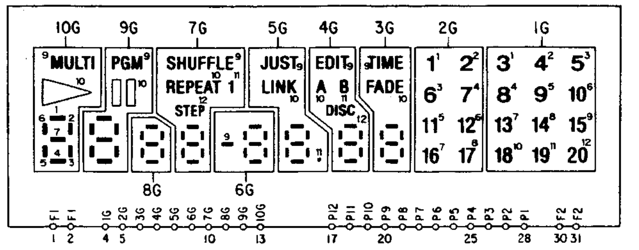
IC105
CN102
IC101
CN101
IC304
IC303
CN201
CN202
CN301
1-638-267-
14
11

【MAIN BOARD】 CONDUCTOR SIDE



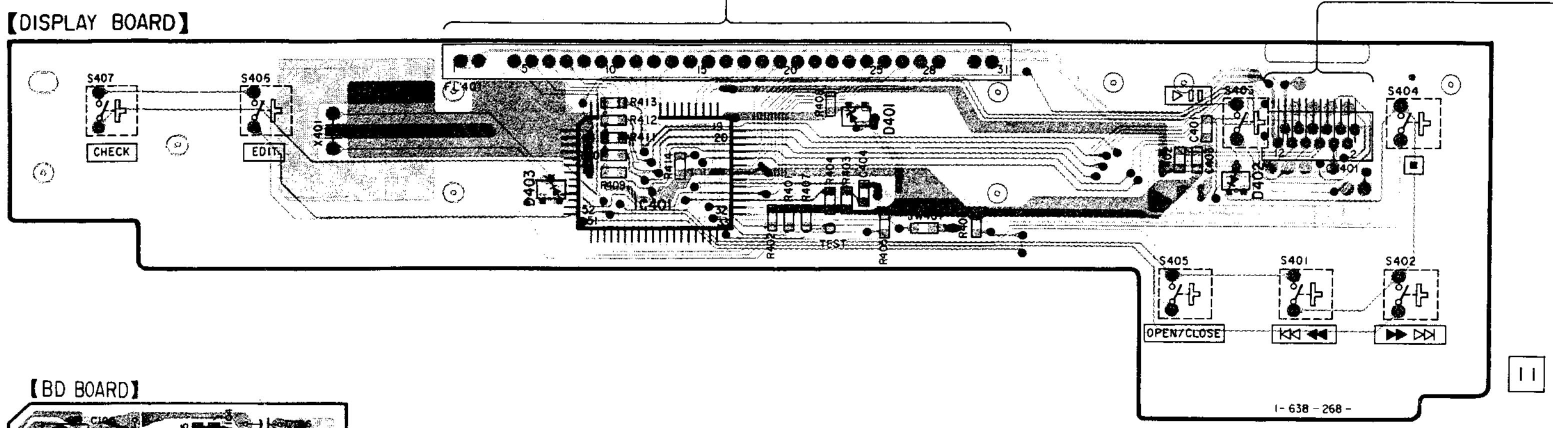
Q306
Q103
IC302
IC203
R220
1-638-267-
14

FL401 FLUORESCENT INDICATOR TUBE



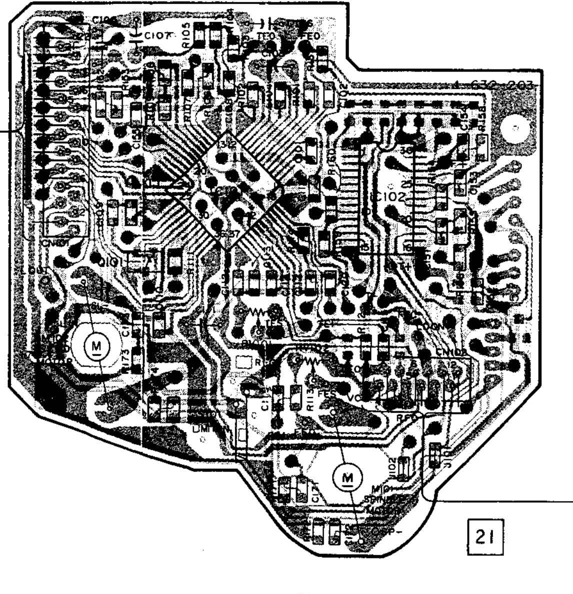
10G
9G
7G
5G
4G
3G
2G
1G
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
8G
6G

【DISPLAY BOARD】

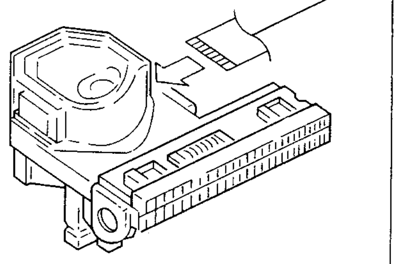


S407
CHECK
S405
EDIT
X401
FL401
IC401
D401
D402
D403
S403
S404
TEST
S405
OPEN/CLOSE
S401
S402
1-638-268-
11

【BD BOARD】



OPTICAL PICK-UP BLOCK
(KSS-240A)



component side.
₃ conductor side.

seeing.

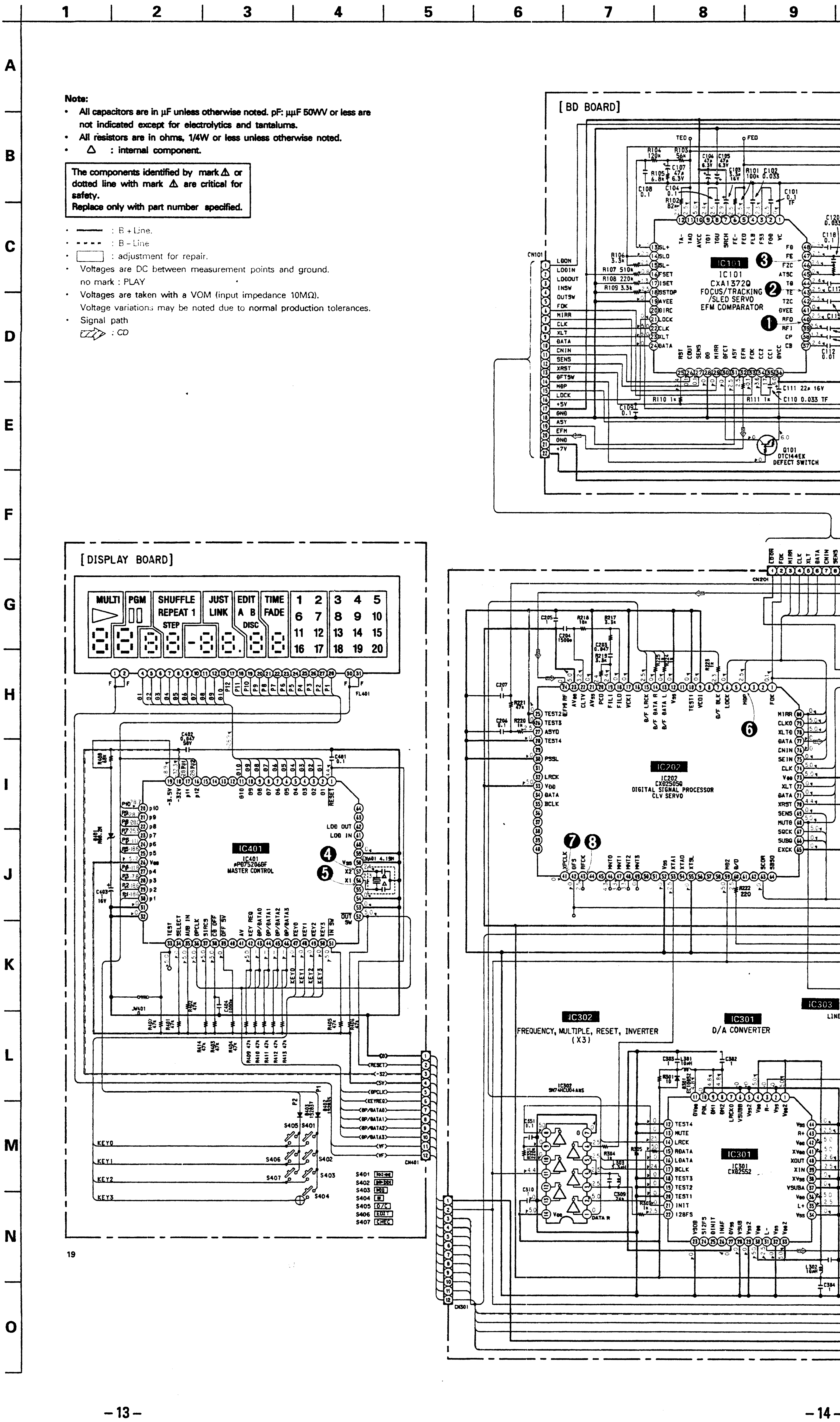
3-4. SCHEMATIC DIAGRAM

Note:

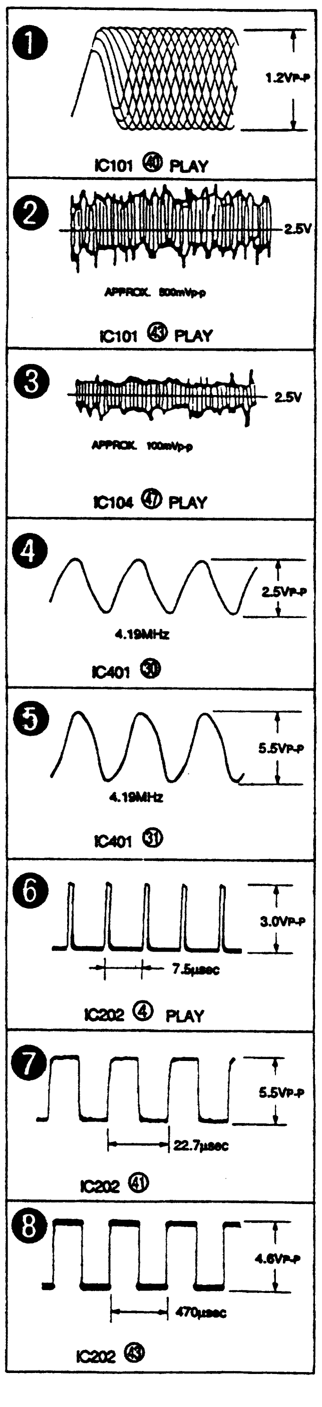
- **All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.**
- **All resistors are in ohms, 1/4W or less unless otherwise noted.**
- **△ : internal component.**

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

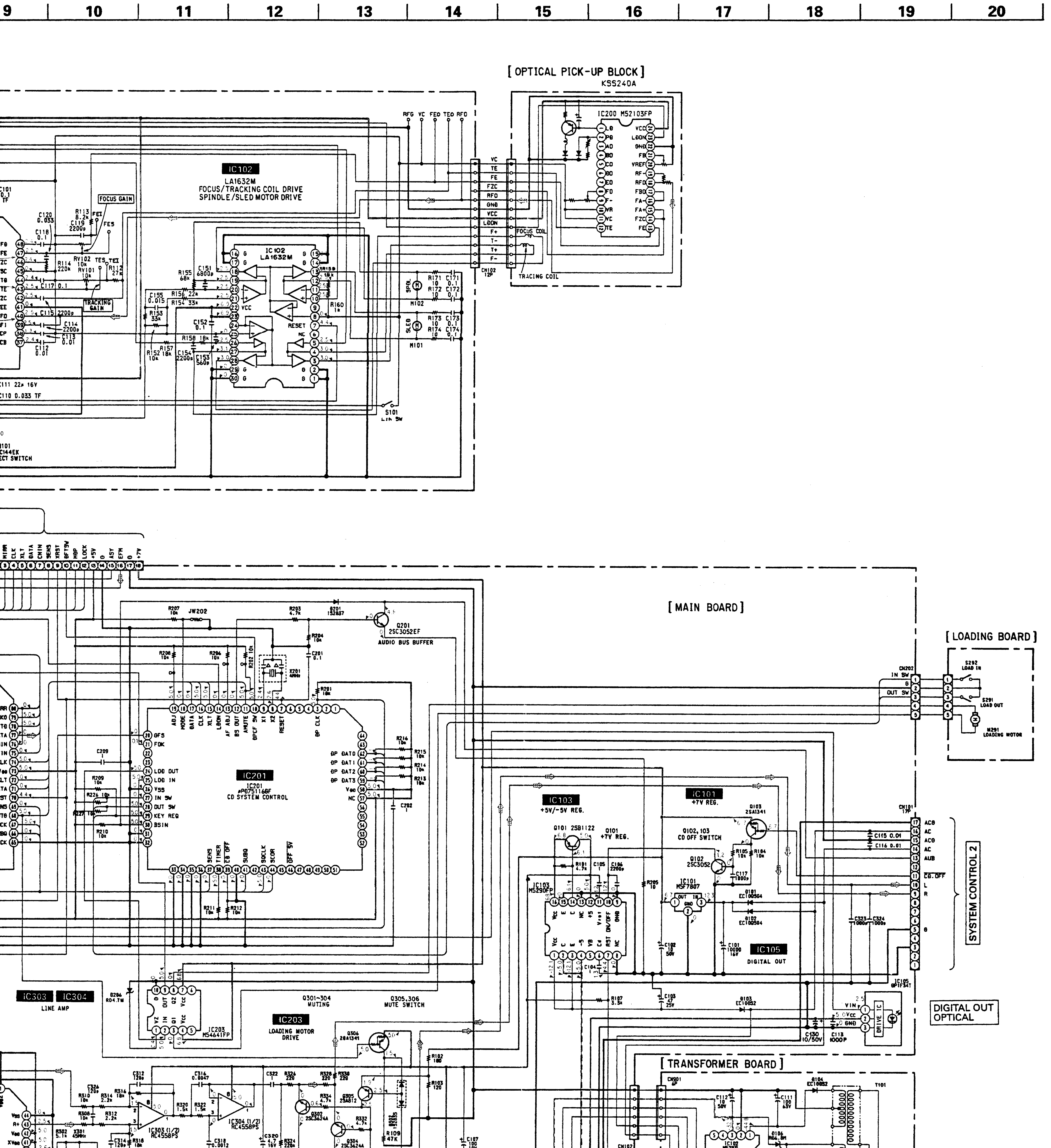
- ——— : B + Line.
- - - - - : B – Line
- ☐ : adjustment for repair.
- Voltages are DC between measurement points and ground.
  no mark : PLAY
- Voltages are taken with a VOM (input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Signal path
  ⇨ : CD


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
[BD BOARD]
IC101
CXA1372Q
FOCUS/TRACKING
/SLED SERVO
EFM COMPARATOR
Q101
DTC144EK
DEFECT SWITCH
CN101
[DISPLAY BOARD]
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
FL401
IC401
µPD75206GF
MASTER CONTROL
CN401
S401
S402
S403
S404
S405
S406
S407
KEY0
KEY1
KEY2
KEY3
19
IC202
CXD2505Q
DIGITAL SIGNAL PROCESSOR
CLV SERVO
CN201
IC302
FREQUENCY, MULTIPLE, RESET, INVERTER
(X3)
IC302
SN74HCU04ANS
IC301
D/A CONVERTER
IC301
CXD2552
IC303
CN301

• Waveforms

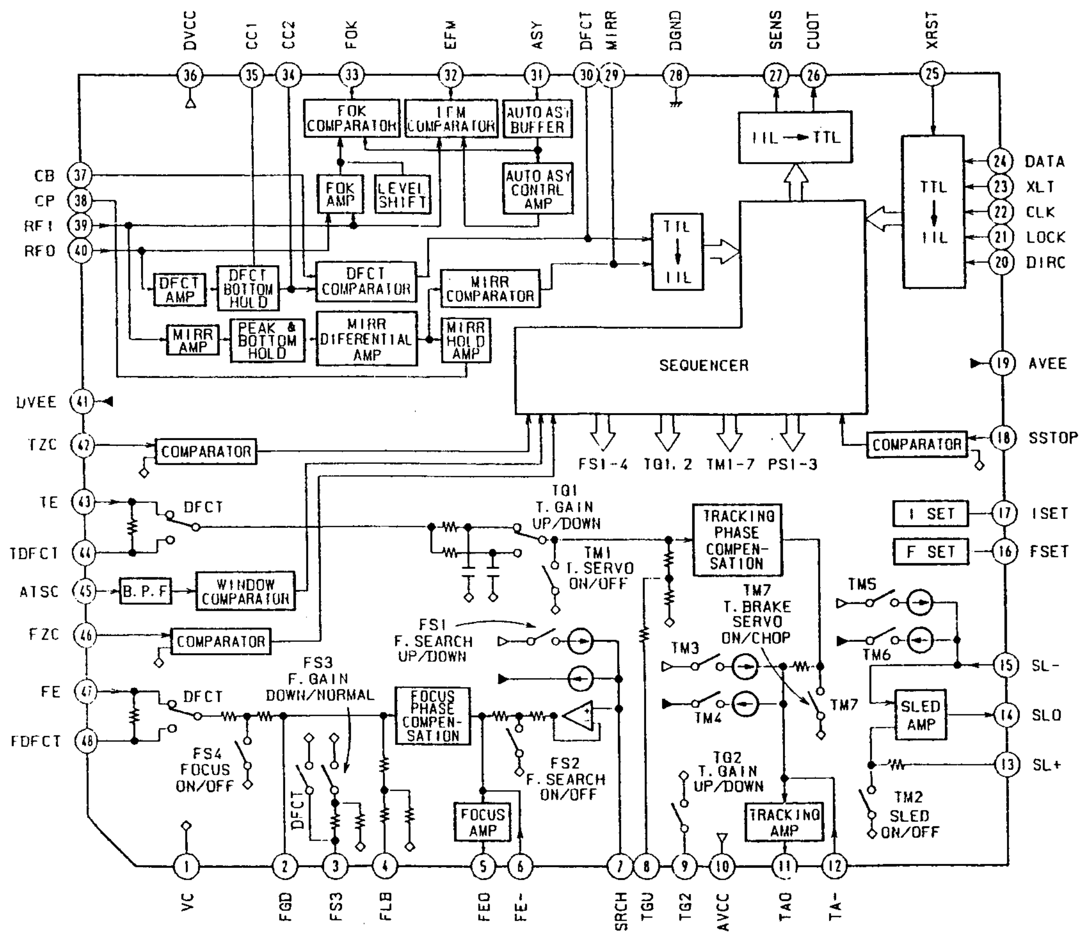


V13727

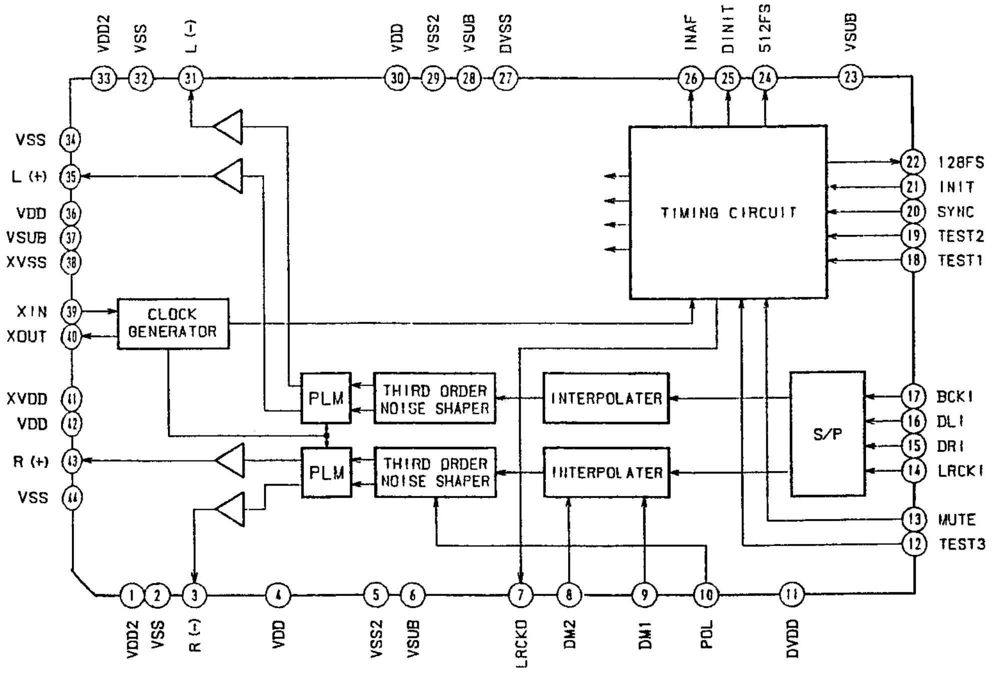

9
10
11
12
13
14
15
16
17
18
19
20
[OPTICAL PICK-UP BLOCK]
KSS240A
IC200 M52103FP
FOCUS COIL
TRACING COIL
CN102 12P
RFG VC FEO TEO RFO
IC102
LA1632M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
FOCUS GAIN
TRACKING GAIN
SPDL M102
SLED M101
S101 LIM SW
[MAIN BOARD]
IC201
IC201 μPD75116BF
CD SYSTEM CONTROL
Q201 2SC3052EF
AUDIO BUS BUFFER
X201 4MHz
[LOADING BOARD]
S292 LOAD IN
S291 LOAD OUT
M291 LOADING MOTOR
CN202
IN SW
OUT SW
IC103
+5V/-5V REG.
IC103 M5290FP
Q101 2SB1122
Q101 +7V REG.
IC101
+7V REG.
IC101 M5F7807
Q103 2SA1341
Q102, 103 CD OFF SWITCH
Q102 2SC3052
CN101 17P
SYSTEM CONTROL 2
IC105
DIGITAL OUT
IC105 GP1F34T
DIGITAL OUT OPTICAL
IC303 IC304
LINE AMP
Q301~304 MUTING
Q305,306 MUTE SWITCH
IC203
LOADING MOTOR DRIVE
IC203 M54641FP
IC303 (1/2) RC4558PS
IC303 (2/2) RC4558PS
IC304 (1/2) RC4558PS
IC304 (2/2) RC4558PS
[TRANSFORMER BOARD]
CN301 6P
CN102 6P
T101
IC102 M5293L
IC102
-32V REG.

3-5. IC BLOCK DIAGRAMS

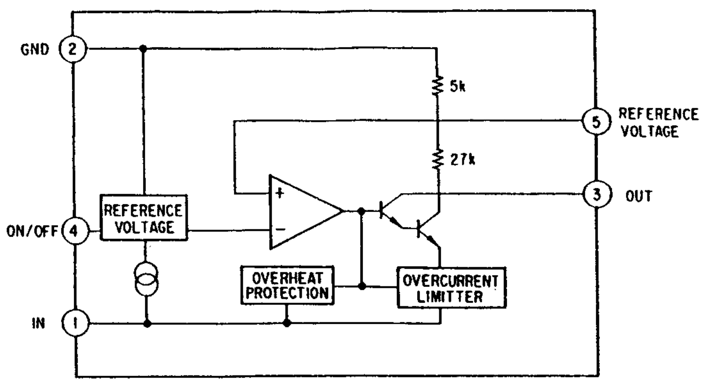
IC101 CXA1372Q


DVCC 36
CC1 35
CC2 34
FOK 33
EFM 32
ASY 31
DFCT 30
MIRR 29
DGND 28
SENS 27
COUT 26
XRST 25
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
FOK AMP
LEVEL SHIFT
AUTO ASY CONTROL AMP
IIL → TTL
TTL ↓ IIL
TIL ↓ IIL
CB 37
CP 38
RFI 39
RFO 40
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
24 DATA
23 XLT
22 CLK
21 LOCK
20 DIRC
19 AVEE
DVEE 41
TZC 42
COMPARATOR
FS1-4 TG1, 2 TM1-7 PS1-3
COMPARATOR
18 SSTOP
TE 43
DFCT
TG1 T. GAIN UP/DOWN
TM1 T. SERVO ON/OFF
TRACKING PHASE COMPEN-SATION
I SET
17 ISET
F SET
16 FSET
TDFCT 44
ATSC 45
B. P. F
WINDOW COMPARATOR
TM7 T. BRAKE SERVO ON/CHOP
TM5
FZC 46
COMPARATOR
FS1 F. SEARCH UP/DOWN
TM3
TM6
15 SL-
FE 47
FS3 F. GAIN DOWN/NORMAL
DFCT
FOCUS PHASE COMPEN-SATION
TM4
TM7
SLED AMP
14 SLO
FDFCT 48
FS4 FOCUS ON/OFF
FS2 F. SEARCH ON/OFF
TG2 T. GAIN UP/DOWN
13 SL+
DFCT
FOCUS AMP
TRACKING AMP
TM2 SLED ON/OFF
1 VC
2 FGD
3 FS3
4 FLB
5 FEO
6 FE-
7 SRCH
8 TGU
9 TG2
10 AVCC
11 TAO
12 TA-

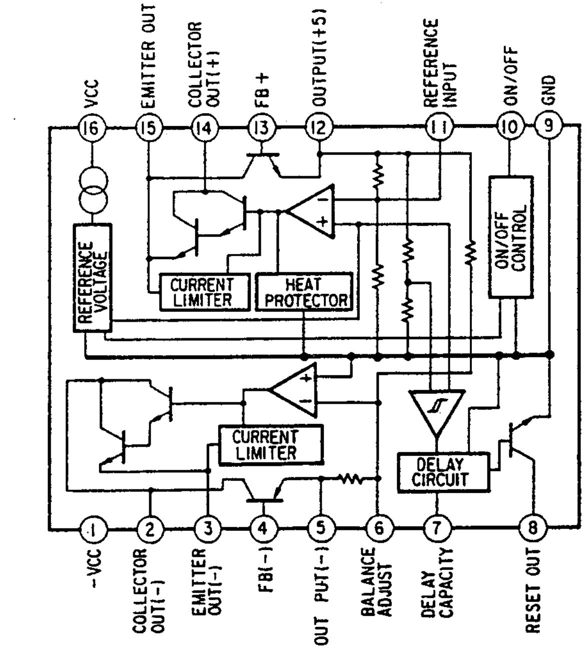
IC301 CXD2552Q


VDD2 33
VSS 32
L (-) 31
VDD 30
VSS2 29
VSUB 28
DVSS 27
INAF 26
DINIT 25
512FS 24
VSUB 23
VSS 34
L (+) 35
VDD 36
VSUB 37
XVSS 38
TIMING CIRCUIT
22 128FS
21 INIT
20 SYNC
19 TEST2
18 TEST1
XIN 39
XOUT 40
CLOCK GENERATOR
XVDD 41
VDD 42
R (+) 43
VSS 44
PLM
THIRD ORDER NOISE SHAPER
INTERPOLATER
S/P
17 BCKI
16 DLI
15 DRI
14 LRCKI
13 MUTE
12 TEST3
1 VDD2
2 VSS
3 R (-)
4 VDD
5 VSS2
6 VSUB
7 LRCKO
8 DM2
9 DM1
10 POL
11 DVDD

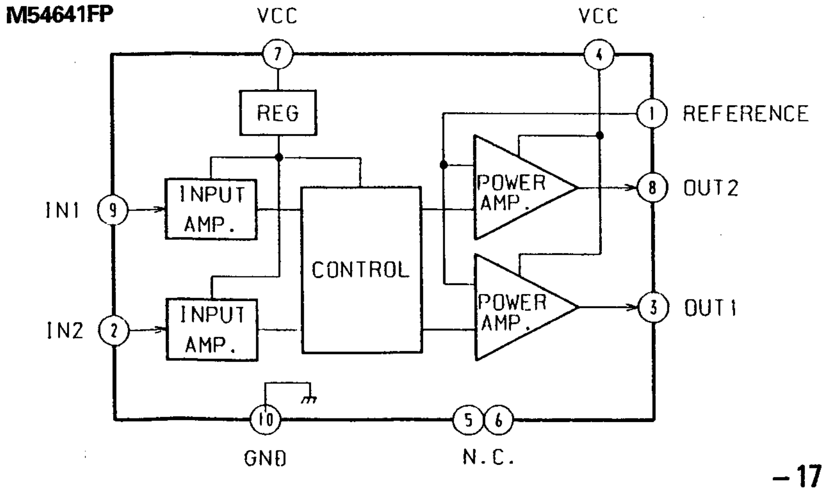
IC102 M5293L


GND 2
5k
27k
5 REFERENCE VOLTAGE
3 OUT
ON/OFF 4
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN 1

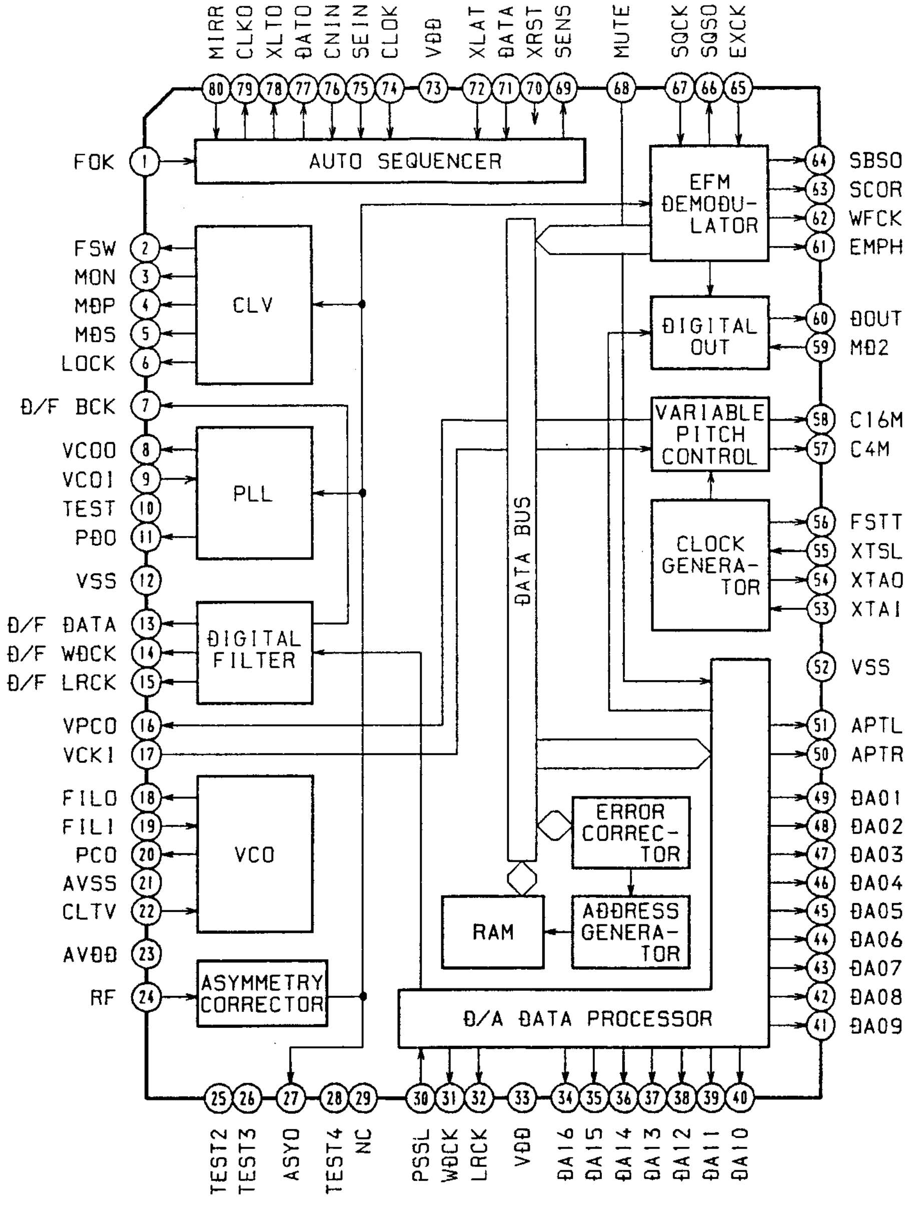
IC103 M5290FP


VCC 16
EMITTER OUT(+) 15
COLLECTOR OUT(+) 14
FB+ 13
OUTPUT(+5) 12
REFERENCE INPUT 11
ON/OFF 10
GND 9
REFERENCE VOLTAGE
CURRENT LIMITER
HEAT PROTECTOR
ON/OFF CONTROL
CURRENT LIMITER
DELAY CIRCUIT
-VCC 1
COLLECTOR OUT(-) 2
EMITTER OUT(-) 3
FB(-) 4
OUT PUT(-) 5
BALANCE ADJUST 6
DELAY CAPACITY 7
RESET OUT 8

IC203 M54641FP


VCC
VCC
7
4
REG
1 REFERENCE
IN1 9
INPUT AMP.
POWER AMP.
8 OUT2
CONTROL
IN2 2
INPUT AMP.
POWER AMP.
3 OUT1
10 GND
5 6 N.C.

IC202 CXD2505Q


MIRR 80
CLKO 79
XLTO 78
DATO 77
CNIN 76
SEIN 75
CLOK 74
VDD 73
XLAT 72
DATA 71
XRST 70
SENS 69
MUTE 68
SQCK 67
SQSO 66
EXCK 65
FOK 1
AUTO SEQUENCER
EFM DEMODU-LATOR
64 SBSO
63 SCOR
62 WFCK
61 EMPH
FSW 2
MON 3
MDP 4
MDS 5
LOCK 6
CLV
DIGITAL OUT
60 DOUT
59 MD2
D/F BCK 7
VARIABLE PITCH CONTROL
58 C16M
57 C4M
VCOO 8
VCOI 9
TEST 10
PDO 11
PLL
CLOCK GENERA-TOR
56 FSTT
55 XTSL
54 XTAO
53 XTAI
VSS 12
DATA BUS
52 VSS
D/F DATA 13
D/F WDCK 14
D/F LRCK 15
DIGITAL FILTER
VPCO 16
VCKI 17
51 APTL
50 APTR
FILO 18
FILI 19
PCO 20
AVSS 21
CLTV 22
VCO
ERROR CORREC-TOR
49 DA01
48 DA02
47 DA03
46 DA04
45 DA05
44 DA06
43 DA07
42 DA08
41 DA09
RAM
ADDRESS GENERA-TOR
AVDD 23
RF 24
ASYMMETRY CORRECTOR
D/A DATA PROCESSOR
25 TEST2
26 TEST3
27 ASYO
28 TEST4
29 NC
30 PSSL
31 WDCK
32 LRCK
33 VDD
34 DA16
35 DA15
36 DA14
37 DA13
38 DA12
39 DA11
40 DA10

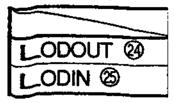
3-6. PIN FU

- IC202 CD S

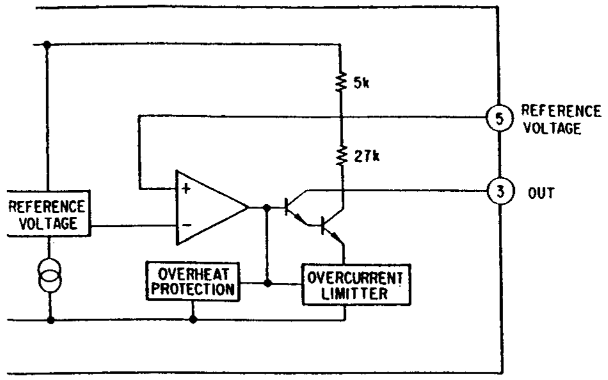
Functions effect
CD unit, data ex

Pin No.
1-2 3 4-6
7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 - 23 24 25
26 27 28 29 30
31 - 36 37 38 39 40
41 42 43 44 45 - 56
57 58 59 - 62 63 - 64

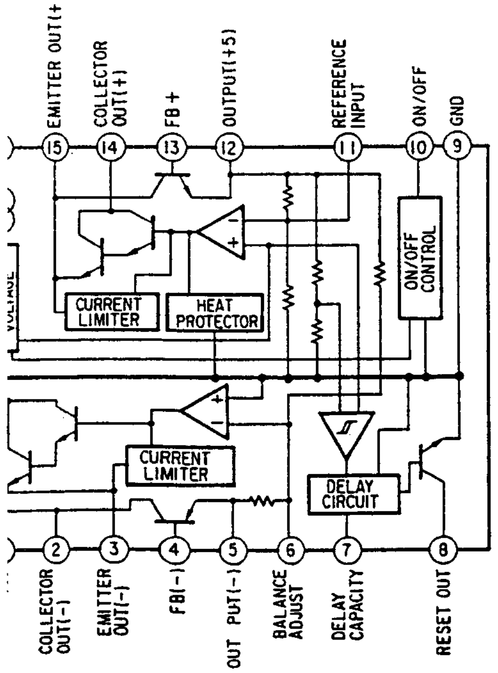
*1 Loading motc


LODOUT ㉔
LODIN ㉕

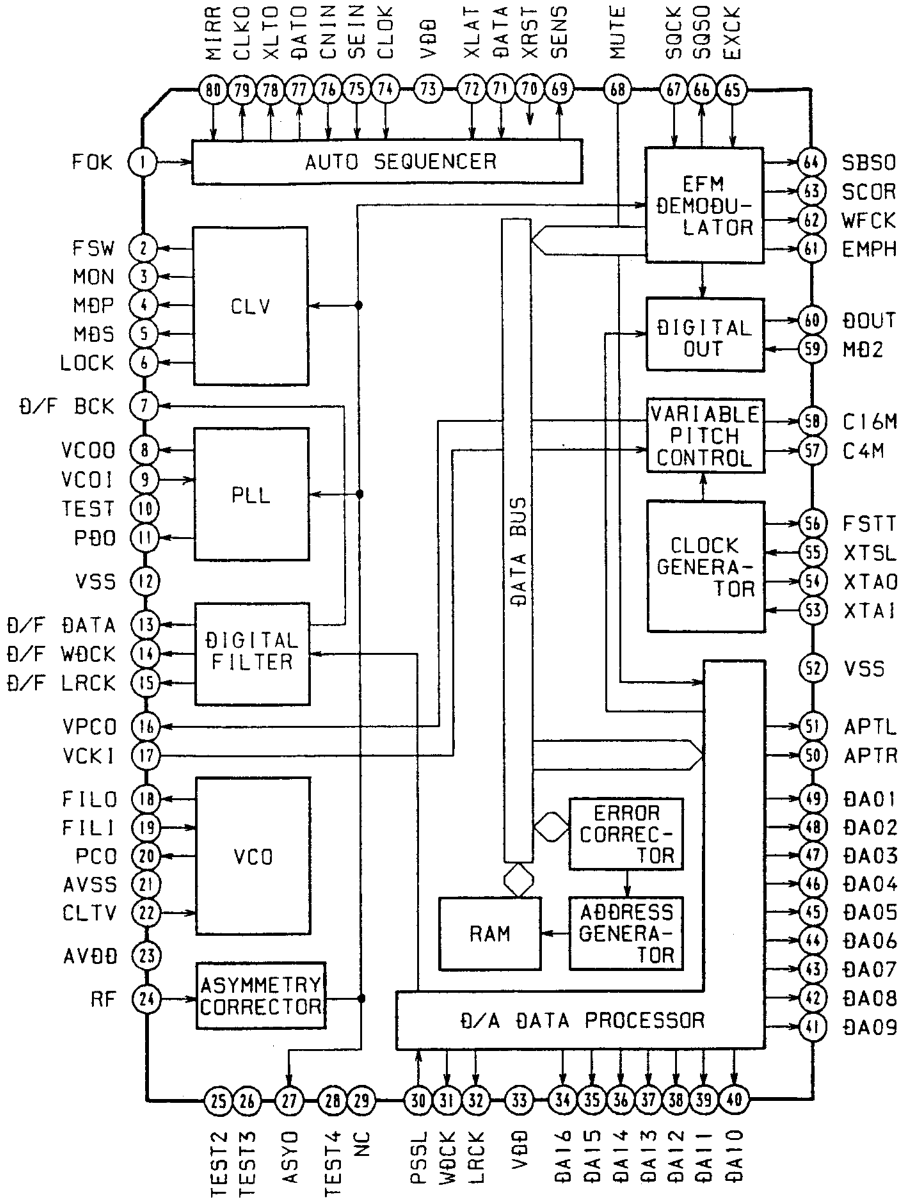
M5293L


5k
27k
5
REFERENCE VOLTAGE
3
OUT
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER

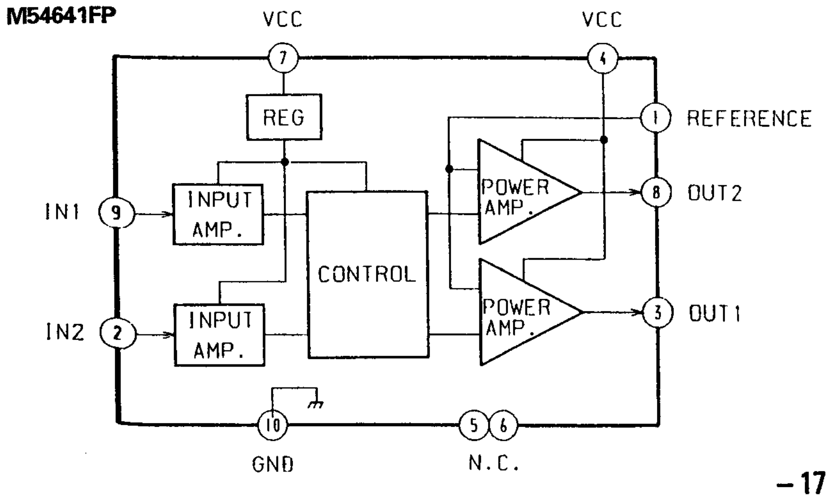
M5290FP


EMITTER OUT(+)
COLLECTOR OUT(+)
FB+
OUTPUT(+5)
REFERENCE INPUT
ON/OFF
GND
CURRENT LIMITER
HEAT PROTECTOR
ON/OFF CONTROL
CURRENT LIMITER
DELAY CIRCUIT
COLLECTOR OUT(-)
EMITTER OUT(-)
FBI(-)
OUT PUT(-)
BALANCE ADJUST
DELAY CAPACITY
RESET OUT

IC202 CXD2505Q


MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
FOK
FSW
MON
MDP
MDS
LOCK
D/F BCK
VCOO
VCOI
TEST
PDO
VSS
D/F DATA
D/F WDCK
D/F LRCK
VPCO
VCKI
FILO
FILI
PCO
AVSS
CLTV
AVDD
RF
AUTO SEQUENCER
EFM DEMODU-LATOR
CLV
DIGITAL OUT
VARIABLE PITCH CONTROL
PLL
DATA BUS
CLOCK GENERA-TOR
DIGITAL FILTER
VCO
ERROR CORREC-TOR
RAM
ADDRESS GENERA-TOR
ASYMMETRY CORRECTOR
D/A DATA PROCESSOR
SBSO
SCOR
WFCK
EMPH
DOUT
MD2
C16M
C4M
FSTT
XTSL
XTAO
XTAI
VSS
APTL
APTR
DA01
DA02
DA03
DA04
DA05
DA06
DA07
DA08
DA09
TEST2
TEST3
ASYO
TEST4
NC
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10

03 M54641FP


VCC
VCC
REG
REFERENCE
INPUT AMP.
POWER AMP.
OUT2
IN1
CONTROL
IN2
INPUT AMP.
POWER AMP.
OUT1
GND
N.C.

3-6. PIN FUNCTION OF IC202 AND IC401

• IC202 CD System Controller (μPD75116GF-760-3BE)

Functions effected by the captioned controller include IC101 (RF signal processing, servo), IC201 (DSP, digital filter) and loading control in the CD unit, data exchange with IC401 (display controller), audio bus entry, etc.

Pin No.	Pin Name	I/O	Description
1-2		O	Not in use with the model (open).
3	DPCLK	O	Display data transfer clock output to IC401 (display micon)
4-6		O	Not in use with the model (open)
7	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
8	X2	I	Clock input
9	X1	I	Clock input (4 MHz)
10	DFCT SW	O	DEFECT circuit ON/OFF switching output of IC101 (CXA1372Q). It is turned OFF ("H") to focus-search the DISC flaw detection circuit.
11	AMUTE	O	Muting control output. "H": Mute
12	BSOUT	O	Audio bus output
13	AFADJ	I	Test mode input. Various test operations are effected upon "L" after turning ON the POWER.
14	LDON	O	Optical pickup laser diode ON/OFF switching output. "H": ON
15	XLT	O	Serial data latch output to IC201 (CXD2505Q)
16	CLK	O	Serial data transfer clock output to IC201 (CXD2505Q)
17	DATA	O	Serial data output to IC201 (CXD2505Q)
18	MODE	I	Not in use with the model (GND)
19	ADJ	I	Test mode input. Upon "L," GFS checking is disabled while continuously rotating the spindle no matter whether frame synch is issued during PLAY, PAUSE or SEARCH.
20	GFS	I	GFS signal input from IC201 (CXD2505Q). "L": NG "H": OK
21	FOK	I	Focus OK signal input from IC101 (CXA1372Q). "H": OK
22 - 23		O	Not in use with the model (open)
24	LODOUT	O	Output to rotate M291 (loading motor) in the loading out direction. *1
25	LODIN	O	Output to rotate M291 (loading motor) in the loading in direction. *1
26	Vss	–	Power terminal (GND)
27	$\overline{\text{IN SW}}$	I	S292 (Loading in switch) input
28	$\overline{\text{OUT SW}}$	I	S291 (Loading out switch) input
29	KEY REQ	I	Key data request input from IC401 (display controller)
30	BS IN	I	Audio bus input
31 - 36			Not in use with the model (GND)
37	$\overline{\text{SENS}}$	I	SENS input from IC101 (CXA1372Q) and IC201 (CXD2505Q)
38	$\overline{\text{TIMER}}$	I	Not in use with the model (pull up)
39	D/F 16BIT	I	IC201 (CXD2505Q) digital filter mode setting input. It is fixed at 16 bit, 4fs with
		I	the model (pull up).
40			Not in use with the model (GND)
41	SUBQ	I	Subcode Q data input from IC201 (CXD2505Q)
42		O	Not in use with the model (open)
43	SQCLK	O	Subcode Q data readout clock output to IC201 (CXD2505Q)
44	SCOR	I	Subcode sync S0 + S1 detection input from IC201 (CXD2505Q)
45 - 56		O	Not in use with the model (open)
57	N.C.	I	Not in use with the model (+5V)
58	V_{DD}	–	Power terminal (+5V)
59 - 62	DPDATA3-0	I/O	Key data input and display data output with IC401 (display controller)
63 - 64		O	Not in use with the model (open)

*1 Loading motor control

	IN	OUT	BRAKE
LODOUT ㉔	L	H	H
LODIN ㉕	H	L	H

• IC401 Display controller (μPD75206GF-716-3BE)

In charge of displaying the FL tube and keying in, it exchanges data with the IC202 (CD syscon) in 4-bit parallel mode.

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
2 - 11	G1-10	O	Digital output to the FL tube
12 - 15		O	Not in use with the model (open)
16, 17	l, k	O	FL tube segment output
18	VLOAD	–	Power supply for the FL tube controller (builtin) (-32V)
19	VPRE	–	Power supply for the FL tube predriver (-3.5V)
20 - 25	j ~ e	O	FL tube segment output
26	VDD	–	Power terminal (+5V)
27, 28	d, c	O	FL tube segment output
29, 30	b, a	O	FL tube segment, key scan output
31, 32		I	Not in use with the model (GND)
33	$\overline{\text{TEST}}$	I	Test mode input. "L": Test mode
34	SELECT	I	Not in use with the model (pull up)
35	BSIN	I	Not in use with the model (pull up)
36	DPCLK	I	Display data transfer clock input from IC202 (CD syscon)
37, 38		I	Not in use with the model (pull up)
39		O	Not in use with the model (pull up)
40, 41		O	Not in use with the model (open)
42	KEY REQ	O	Key data request output to IC202 (CD syscon)
43 - 46	DPDATA0-3	I/O	Key data output and display data input with IC202 (CD syscon)
47 - 50	KEY0-3	I	Key data input
51, 52		I	Not in use with the model (pull up)
53, 54		I	Not in use with the model (GND)
55		O	Not in use with the model (open)
56	X1	I	System clock input (4.19 MHz)
57	X2	I	System clock input
58	Vss	–	Power supply terminal (GND)
59		I	Not in use with the model (GND)
60 - 64		O	Not in use with the model (open)

SECTION 4
EXPLODED VIEW

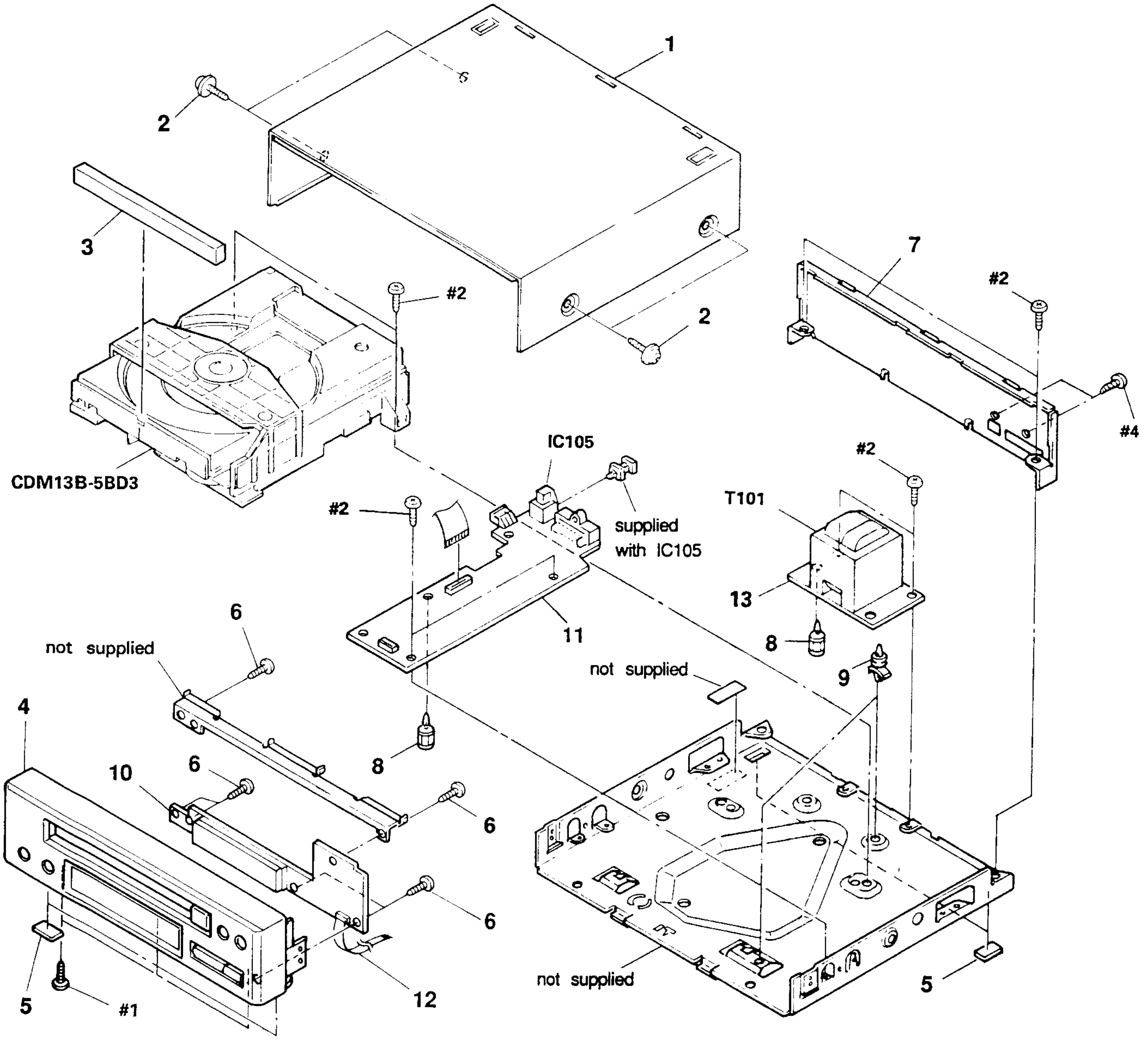
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

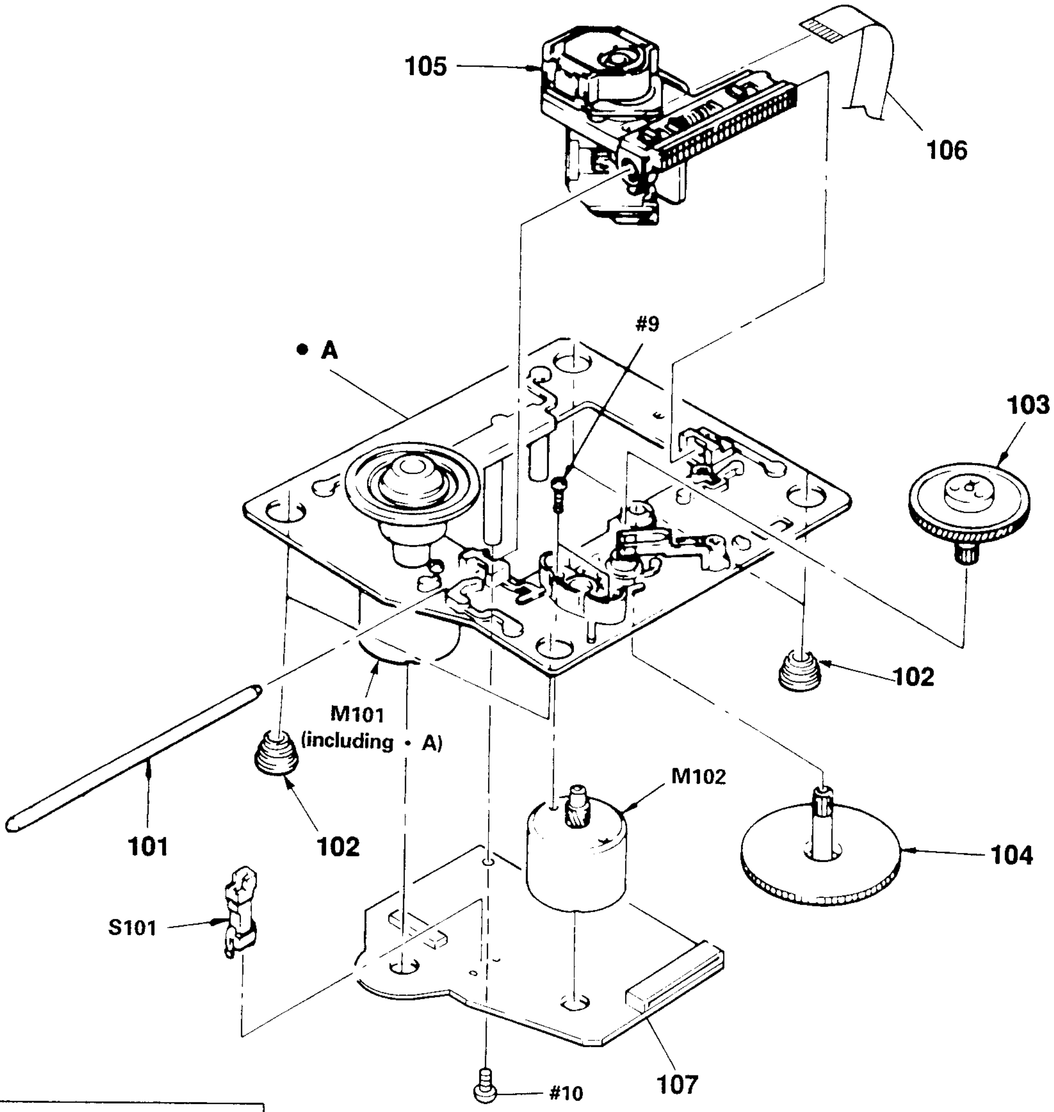
When indicating parts by reference number, please include the board name.

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
1	* 4-944-423-01	CASE (K206522)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	4-944-417-01	PANEL, LOADING	
4	X-4941-522-1	PANEL ASSY, FRONT	
5	4-930-336-01	FOOT (FELT)	
6	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
7	* 4-943-175-41	PAENL, BACK	
8	* 3-669-610-00	SPACER	
9	* 4-924-098-11	HOLDER, PC BOARD	
10	* A-4617-811-A	DISPLAY BOARD, COMPLETE	
11	* A-4617-805-A	MAIN BOARD, COMPLETE	
12	1-575-001-11	WIRE, FILM TYPE (12 CORE)	
13	* 1-638-269-11	TRANSFORMER BOARD	
T101	⚠ 1-450-341-11	TRANSFORMER, POWER	

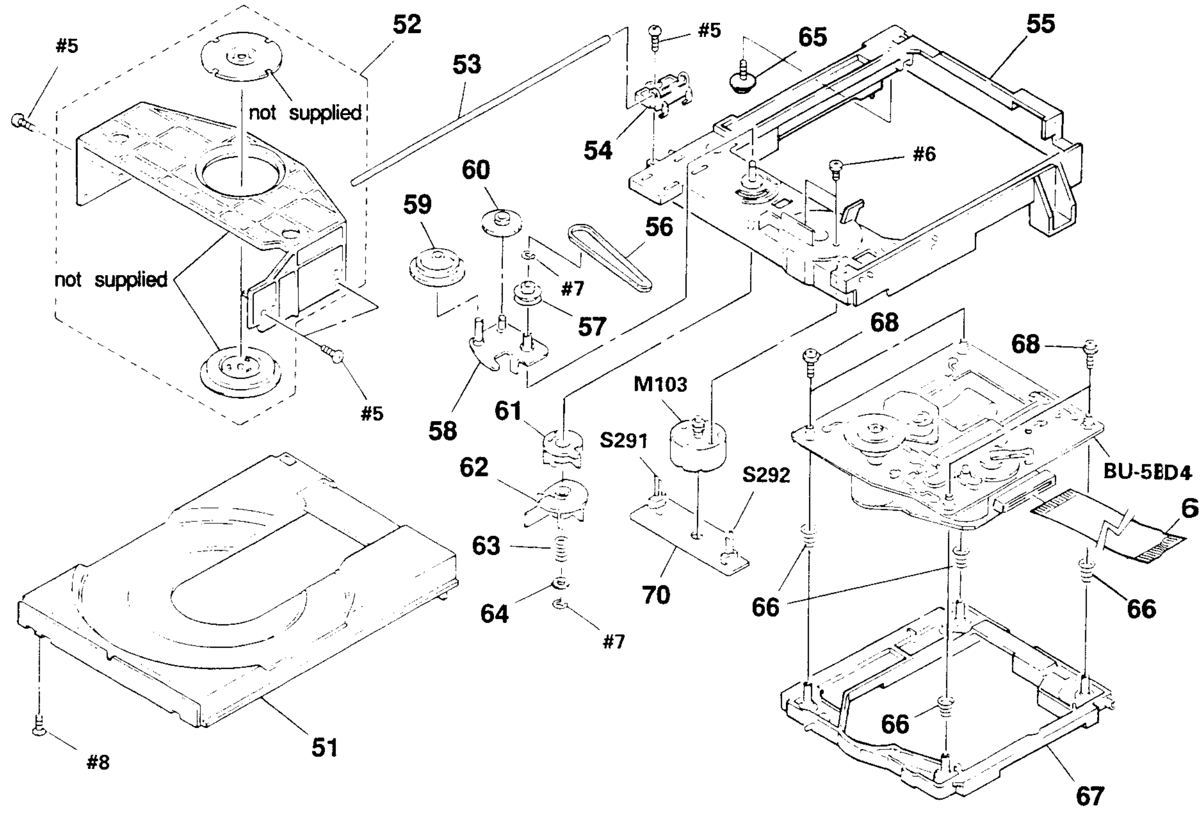
(3) OPTICAL PICK-UP BLOCK (BU-5BD3)


105
106
#9
• A
103
102
M101
(including • A)
M102
101
102
104
S101
#10
107

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.		Part No.	Description	Remarks
101		4-917-565-01	SHAFT, SLED	
102		4-933-126-01	INSULATOR (A)	
103		4-917-567-01	GEAR (M)	
104		4-917-564-01	GEAR (P), FLATNESS	
105	⚠	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106		1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
107	*	A-4617-371-A	BD BOARD, COMPLETE	
M101		X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102		X-4917-504-1	ASSY, MOTOR (SLED)	
S101		1-572-085-11	SWITCH, LEAF (LIMIT IN)	

(2) CD MECHANISM SECTION (CDM13B-5BD3)


52
#5
53
not supplied
#5
65
55
54
#6
60
59
56
#7
57
not supplied
68
68
#5
58
61
M103
S291
BU-5BD4
62
S292
69
63
70
66
66
64
#7
66
#8
51
67

Ref. No.	Part No.	Description	Remarks
51	4-944-012-01	TABLE, DISC	
52	A-4604-752-A	HOLDER (MG) ASSY	
53	4-929-764-01	SHAFT (TABLE GUIDE)	
54	4-944-006-01	BEARING	
55	X-4941-462-1	CHASSIS (MD) ASSY	
56	4-927-649-01	BELT	
57	4-929-724-01	PULLEY (B)	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-11	GEAR (P)	
60	4-927-628-01	GEAR (C)	
61	4-929-727-01	CAM (A)	
62	4-929-729-01	CAM (B)	
63	3-659-338-00	SPRING, COMPRESSION	
64	4-927-654-01	WASHER (LIMITER)	
65	* 4-917-583-21	BRACKET, YOKE	
66	4-917-541-01	SPRING (B)	
67	4-929-747-01	HOLDER (BU)	
68	4-933-134-01	SCREW (+PTPWH M2. 6X6)	
69	1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
70	* 1-634-461-11	LOADING BOARD	
M103	A-4608-362-A	MOTOR (L) ASSY (LOADING)	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF :μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	* A-4617-371-A	BD BOARD, COMPLETE ******************				
		(CAPACITOR)				
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
C103	1-126-163-11	ELECT	4.7uF	20%	50V	
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C105	1-126-154-11	ELECT	47uF	20%	6.3V	
C106	1-126-154-11	ELECT	47uF	20%	6.3V	
C107	1-126-154-11	ELECT	47uF	20%	6.3V	
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
C111	1-131-367-00	TANTALUM	22uF	10%	20V	
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V	
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V	

Ref. No.	Part No.	Description				Remarks
		(CONNECTOR)				
CN101	1-568-796-11	SOCKET, CONNECTOR 22P				
CN102	1-568-795-11	SOCKET, CONNECTOR 12P				
		(IC)				
IC101	8-752-050-82	IC CXA1372Q				
IC102	8-759-822-36	IC LA6532M				
		(JACK)				
J101	1-216-295-00	METAL CHIP	0	5%	1/10W	
J102	1-216-295-00	METAL CHIP	0	5%	1/10W	
		(TRANSISTOR)				
Q101	8-729-901-01	TRANSISTOR DTC144EK				
		(RESISTOR)				
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W	
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W	

BD MAIN DISPLAY TRANSFORMER

Ref. No.	Part No.	Description			Remarks
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W

(VARIABLE RESISTOR)

RV101	1-238-016-11	RES, ADJ, CARBON 10K
RV102	1-238-016-11	RES, ADJ, CARBON 10K

(SWITCH)

S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)

****

* A-4617-805-A MAIN BOARD, COMPLETE

****

* A-4617-811-A DISPLAY BOARD, COMPLETE

****

* 1-638-269-11 TRANSFORMER BOARD

****

* 4-880-403-11 HEAT SINK

* 4-932-810-11 CUSHION (FL)

(CAPACITOR)

C101	1-126-939-11	ELECT	10000uF	20%	16V
C102	1-124-907-11	ELECT	10uF	20%	50V
C103	1-124-477-11	ELECT	47uF	20%	25V
C104	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-164-346-11	CERAMIC CHIP	1uF		16V
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C107	1-124-443-00	ELECT	100uF	20%	10V
C108	1-124-443-00	ELECT	100uF	20%	10V
C111	1-126-063-11	ELECT	100uF	20%	63V
C112	1-124-907-11	ELECT	10uF	20%	50V
C113	1-164-346-11	CERAMIC CHIP	1uF		16V
C115	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C116	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C117	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C201	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-164-346-11	CERAMIC CHIP	1uF		16V
C203	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C204	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remarks
C207	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C302	1-164-346-11	CERAMIC CHIP	1uF		16V
C303	1-164-346-11	CERAMIC CHIP	1uF		16V
C304	1-164-346-11	CERAMIC CHIP	1uF		16V
C305	1-164-346-11	CERAMIC CHIP	1uF		16V
C306	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C307	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C309	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C310	1-164-346-11	CERAMIC CHIP	1uF		16V
C311	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C312	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C313	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C314	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C315	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C316	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C317	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C318	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C319	1-164-346-11	CERAMIC CHIP	1uF		16V
C320	1-164-346-11	CERAMIC CHIP	1uF		16V
C321	1-164-346-11	CERAMIC CHIP	1uF		16V
C322	1-164-346-11	CERAMIC CHIP	1uF		16V
C323	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C325	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C326	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C351	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C401	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C402	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C403	1-164-346-11	CERAMIC CHIP	1uF		16V
C404	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

(CONNECTOR)

CN101	*	1-569-624-11	SOCKET, CONNECTOR 17P
CN102		1-568-662-11	CONNECTOR, BOARD TO BOARD 6P
CN201		1-568-802-11	SOCKET, CONNECTOR 19P
CN202	*	1-564-339-00	PIN, CONNECTOR 5P
CN203	*	1-564-340-00	PIN, CONNECTOR 6P
CN301	*	1-573-099-11	HOUSING, CONNECTOR 12P
CN401	*	1-573-098-11	HOUSING, CONNECTOR 12P
CN901		1-568-668-11	CONNECTOR, BOARD TO BOARD 6P

(DIODE)

D101	8-719-210-39	DIODE EC10QS-04
D102	8-719-210-39	DIODE EC10QS-04
D103	8-719-210-33	DIODE EC10DS2
D104	8-719-210-33	DIODE EC10DS2
D106	8-719-106-17	DIODE RD6.8M-B2
D201	8-719-400-18	DIODE MA152WK

When indicating parts by reference number, please include the board name.

MAIN DISPLAY TRANSFORMER

Ref. No.	Part No.	Description	Remarks
D206	8-719-105-74	DIODE RD4.7M-B3	
D301	8-719-210-33	DIODE EC10DS2	
D302	8-719-104-34	DIODE 1S2836	
D401	8-719-106-36	DIODE RD8.2M-B3	
D402	8-719-104-34	DIODE 1S2836	
D403	8-719-400-18	DIODE MA152WK	
		(INDICATOR TUBE)	
FL401	1-519-652-11	INDICATOR TUBE, FLUORESCENT	
		(IC)	
IC101	8-759-604-86	IC M5F7807L	
IC102	8-759-633-42	IC M5293L	
IC103	8-759-636-24	IC M5290FP	
IC105	8-749-922-39	IC GP1F34T	
IC201	8-759-153-16	IC uPD75116GF-760-3BE	
IC202	8-752-340-37	IC CXD2505Q	
IC203	8-759-636-20	IC M54641FP	
IC301	8-752-334-87	IC CXD2552Q	
IC302	8-759-927-29	IC SN74HCU04ANS	
IC303	8-759-981-95	IC RC4558S	
IC304	8-759-981-95	IC RC4558S	
IC401	8-759-154-14	IC uPD75206GF-716-3BE	
		(JUMPER)	
JW201	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW202	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW401	1-216-295-00	METAL CHIP 0 5% 1/10W	
		(COIL)	
L301	1-410-381-11	INDUCTOR CHIP 10uH	
L302	1-410-381-11	INDUCTOR CHIP 10uH	
L303	1-410-375-11	INDUCTOR CHIP 3.3uH	
		(TRANSISTOR)	
Q101	8-729-804-41	TRANSISTOR 2SB1122-S	
Q102	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q103	8-729-805-69	TRANSISTOR 2SA1341	
Q201	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q301	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q302	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q303	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q304	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q306	8-729-805-69	TRANSISTOR 2SA1341	
		(RESISTOR)	
R101	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R102	1-216-031-00	METAL CHIP 180 5% 1/10W	
R103	1-216-027-00	METAL CHIP 120 5% 1/10W	
R104	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R106	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R107	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R109	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R203	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R204	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R205	1-216-001-00	METAL CHIP 10 5% 1/10W	
R206	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R211	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R212	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R213	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R214	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R215	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R216	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R217	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R218	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R219	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R220	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R221	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R222	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R223	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R224	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R225	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R226	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R227	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R301	1-216-001-00	METAL CHIP 10 5% 1/10W	
R302	1-216-066-00	METAL CHIP 5.1K 5% 1/10W	
R303	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R304	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R305	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R307	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R308	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R309	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R310	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R311	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R312	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R313	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R314	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R315	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R316	1-216-079-00	METAL CHIP 18K 5% 1/10W	

When indicating parts by reference number, please include the board name.

MAIN **DISPLAY** **TRANSFORMER** **LOADING**

Ref. No.	Part No.	Description	Remarks
R317	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R318	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R319	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R320	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R321	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R322	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R323	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R324	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R325	1-216-033-00	METAL CHIP 220 5% 1/10W	
R326	1-216-033-00	METAL CHIP 220 5% 1/10W	
R327	1-216-033-00	METAL CHIP 220 5% 1/10W	
R328	1-216-033-00	METAL CHIP 220 5% 1/10W	
R329	1-216-033-00	METAL CHIP 220 5% 1/10W	
R330	1-216-033-00	METAL CHIP 220 5% 1/10W	
R331	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R332	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R333	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R334	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R351	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R401	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R402	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R403	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R404	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R405	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R406	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R407	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R408	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R409	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R410	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R411	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R412	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R413	1-216-089-00	METAL CHIP 47K 5% 1/10W	
		(SWITCH)	
S401	1-572-184-11	SWITCH, KEYBOARD (⏮ ◀◀)	
S402	1-572-184-11	SWITCH, KEYBOARD (▶▶ ⏭)	
S403	1-572-184-11	SWITCH, KEYBOARD (▶❚❚)	
S404	1-572-184-11	SWITCH, KEYBOARD (■)	
S405	1-572-184-11	SWITCH, KEYBOARD (OPEN/CLOSE)	
S406	1-572-184-11	SWITCH, KEYBOARD (EDIT)	
S407	1-572-184-11	SWITCH, KEYBOARD (CHECK)	
		(TRANSFORMER)	
T101	⚠ 1-450-341-11	TRANSFORMER, POWER	
		(CRYSTAL)	
X201	1-577-358-21	VIBRATOR, CERAMIC (4.0MHz)	
X301	1-577-686-11	VIBRATOR, CRYSTAL (45MHz)	
X401	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

****

Ref. No.	Part No.	Description	Remarks
	* 1-634-461-11	LOADING BOARD	
		*************	
		(CONNECTOR)	
CN291	* 1-564-498-11	PIN, CONNECTOR 5P	
		(SWITCH)	
S291	1-571-924-11	SWITCH, LEAF (LOADING OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOADING IN)	

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	Remarks
12	1-575-001-11	WIRE, FILM TYPE (12 CORE)	
69	1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
105	⚠ 8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102	X-4917-504-1	ASSY, MOTOR (SLED)	
M103	A-4608-362-A	MOTOR (L) ASSY (LOADING)	

****

ACCESSORY & PACKING MATERIAL
****

Ref. No.	Part No.	Description	Remarks
	4-920-941-01	SHEET (B), PROTECTION	
	* 4-941-548-01	LABEL, CLASS 1	
	* 4-945-079-01	CUSHION	

****

HARDWARE LIST

Ref. No.	Part No.	Description
# 1	7-682-547-09	SCREW +BVTT 3X6 (S)
# 2	7-682-547-04	SCREW +BVTT 3X6 (S)
# 3	7-685-135-19	SCREW +BTP 2.6X10 TYPE2 N-S
# 4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
# 5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
# 6	7-621-775-10	SCREW +B 2.6X4
# 7	7-624-105-04	STOP RING 2.3, TYPE -E
# 8	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT
# 9	7-621-255-15	SCREW +P 2X3
#10	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#11	7-682-548-04	SCREW +BVTT 3X8 (S)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CDP-H3600

SONY

SERVICE MANUAL

AEP Model
UK Model

CORRECTION-1

Correct your service manual as shown below.

SUPPLEMENT-1
SERVICE MANUAL

☛ : Indicates corrected portion

Page	INCORRECT			CORRECT		
	No.	Part No.	Description	No.	Part No.	Description
<25> (25)	IC303	8-759-981-95	IC RC4558PS	IC303	8-759-996-43 ☛	IC RC4558PS
	IC304	8-759-981-95	IC RC4558PS	IC304	8-759-996-43 ☛	IC RC4558PS

< > SUPPLEMENT-1
( ) SERVICE MANUAL

9-956-211-92

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Audio Group

English
91L1962-1
Printed in Japan

© 1991.12

Published by Customer Relations and Service Group

CDP-H3600

SONY®

SERVICE MANUAL

AEP Model
UK Model

SUPPLEMENT-1

File this supplement with the service manual.

Addition of Main Board

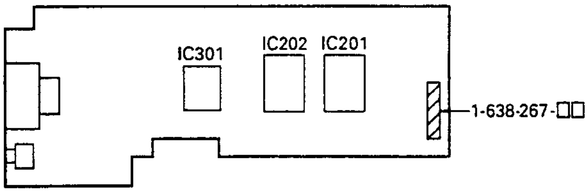
Any of the following 2 types of main boards is used in the equipment.

- Type A with an IC CXD2552Q to D/A converter.
- Type C with an IC PCM67U to D/A converter.

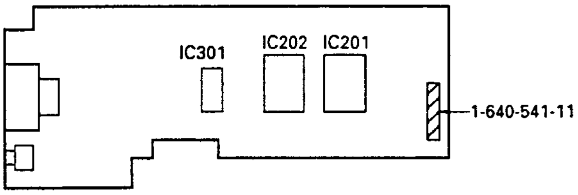
The description of the Service Manual is given relating only to Type A, so refer to the following Note to discriminate the types. The schematic diagram, printed wiring diagram, etc. of Type C are also herewith attached.

Note for discrimination:
You can discriminate either type according to the silk printing and mounted parts on the main board.

• A Type



• C Type



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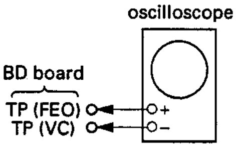
SECTION 1
ELECTRICAL BLOCK CHECKING

Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

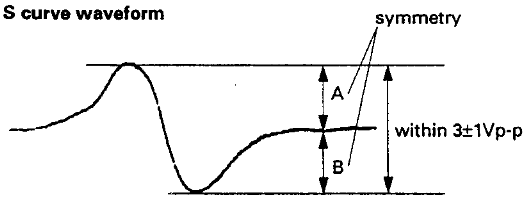
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

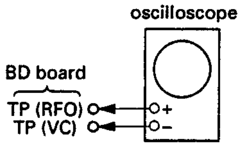
S curve waveform



5. After check, remove the lead wire connected in step 2.

Note :
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



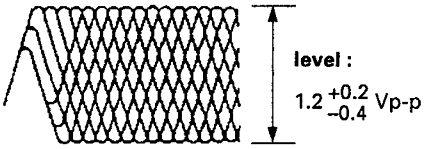
Procedure :

1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

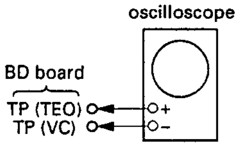
Note :
Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

RF signal waveform

VOLT/DIV : 200mV
TIME/DIV : 500nS



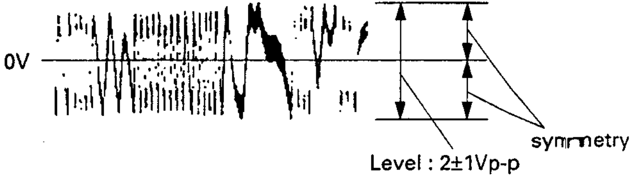
E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope

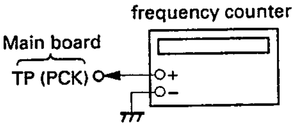


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.

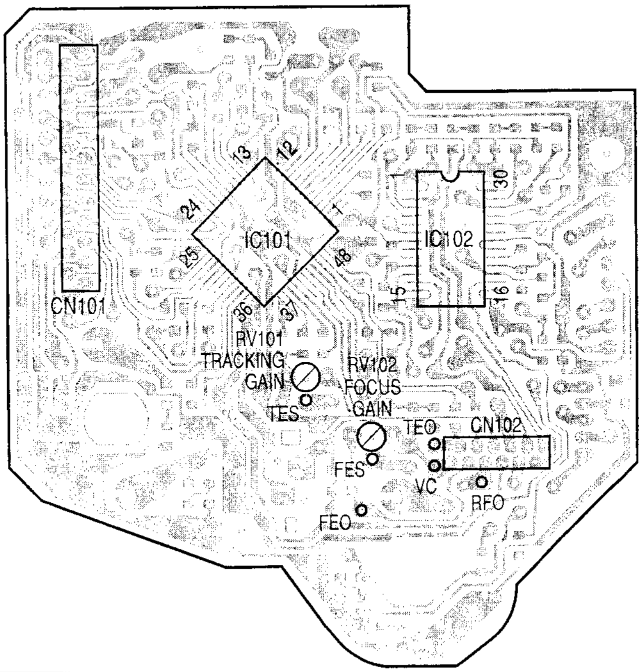

frequency counter
Main board
TP (PCK)
+
–

2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

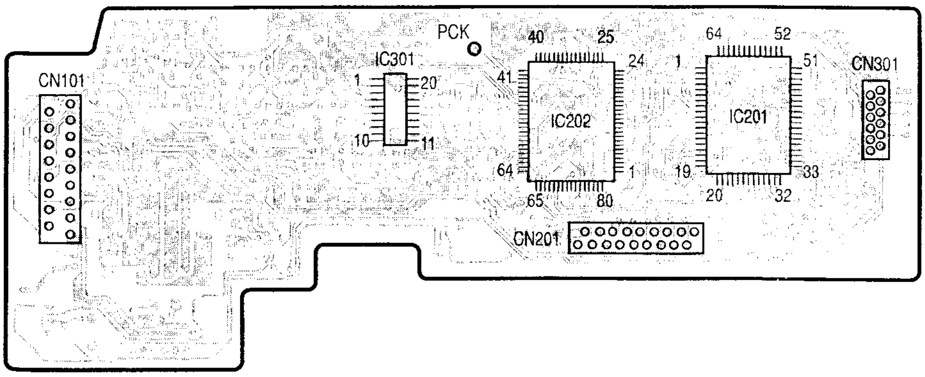
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

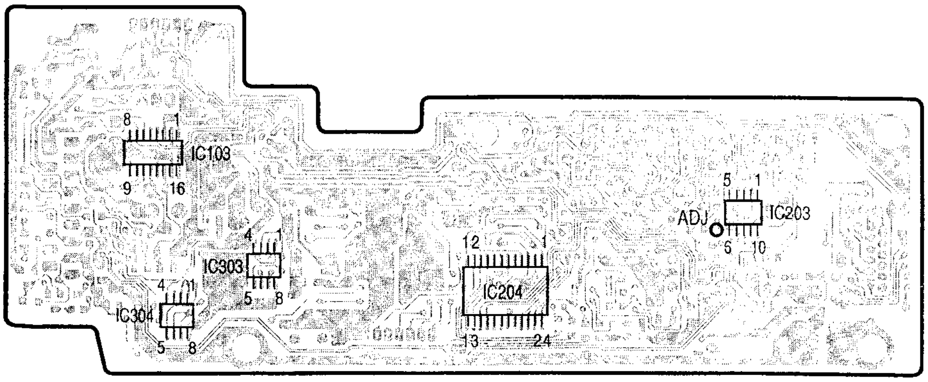
[BD BOARD] – Component Side –


CN101
IC101
13
12
24
1
25
48
36
37
IC102
30
15
16
RV101
TRACKING
GAIN
TES
RV102
FOCUS
GAIN
TEO
CN102
FES
VC
RFO
FEO

[MAIN BOARD] – Component Side –


CN101
PCK
IC301
1
20
10
11
40
25
24
41
IC202
64
1
65
80
64
52
51
1
IC201
19
33
20
32
CN301
CN201

[MAIN BOARD] – Conductor Side –


8
1
IC103
9
16
4
1
IC303
5
8
4
1
IC304
5
8
12
1
IC204
13
24
5
1
ADJ
IC203
6
10

[TEST MODES]

1. Test mode of display micon (IC401)

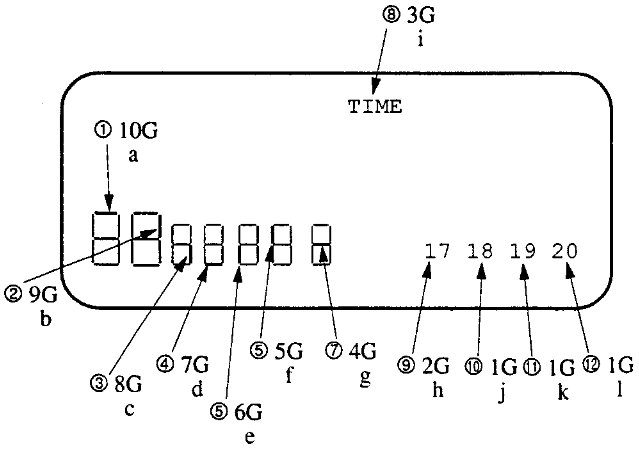
Connect Pin ㉝ of IC401 to ground and turn ON the POWER switch, thus you can test the following 3 tests.

(1) All FL tube ON

This mode is actuated immediately after turning ON the POWER switch.

(2) FL tube segment check

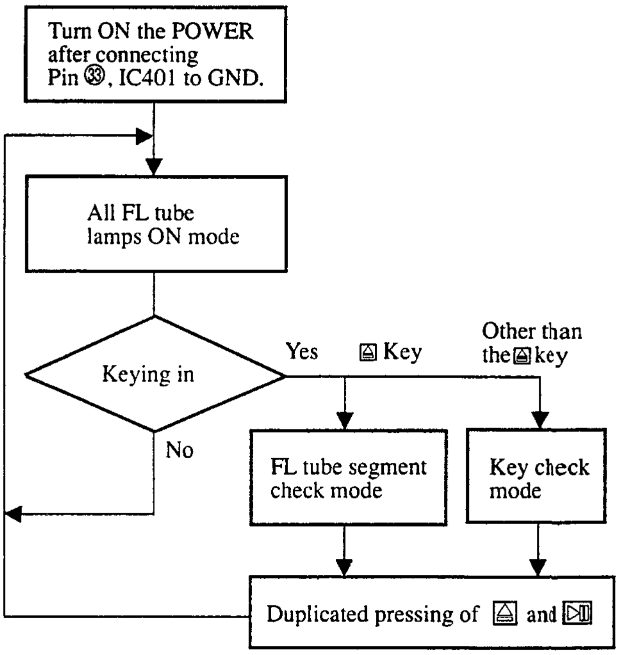
This mode is actuated by pressing the ⏏ key in the state of (1). Every time the ⏏ key is pressed, the segments are indicated sequentially from the segment a. When the last l segment is displayed, keying in is no longer accepted while continuing the lighting-up state of the last segment. Conditions are normal provided all lamps light up in the following order.


⑧ 3G
i
TIME
① 10G
a
② 9G
b
③ 8G
c
④ 7G
d
⑤ 5G
f
⑤ 6G
e
⑦ 4G
g
17 18 19 20
⑨ 2G
h
⑩ 1G
j
⑪ 1G
k
⑫ 1G
l

(3) KEY check

This mode is effected by pressing the ⏏ key in the state of (1), while indicating "1." Every time a new key is pressed subsequently, the indicated number is incremented. Conditions are normal provided "7" is indicated when all types of keys are pressed. Even if a key is pressed again, it is not counted.

* To leave the mode (2) or (3), press the ⏏ and ⏯ keys in duplication, thereby the mode returning to all ON mode.


Turn ON the POWER after connecting Pin ㉝, IC401 to GND.
All FL tube lamps ON mode
Keying in
Yes
⏏ Key
Other than the ⏏ key
No
FL tube segment check mode
Key check mode
Duplicated pressing of ⏏ and ⏯

2. Test Modes of CD Syscon (IC201)

(1) ADJUST mode

When this mode is effected, the machine is operated normally except for the following.

- When pin ⑲, IC201 (ADJ) is set to "L" after turning ON the POWER switch:

1. GFS is no longer monitored during PLAY, PAUSE or SEARCH, while not stopping even with GFS remaining still at "L" (NG).
2. No high-speed feeding is activated during SEARCH.
3. Focus gain is reset to normal gain during PLAY (normally, the gain is lowered to reduce noise when FOCUS is locked).

- When Pin ⑬, IC201 (AFADJ) is set to "L" after turning ON the POWER switch:

1. Regardless of Pin ⑲ (ADJ) of the CLV-S fixed function, the CLV mode during PLAY becomes CLV-S (rough servo) only while Pin e remains "L".

(2) AFADJUST mode

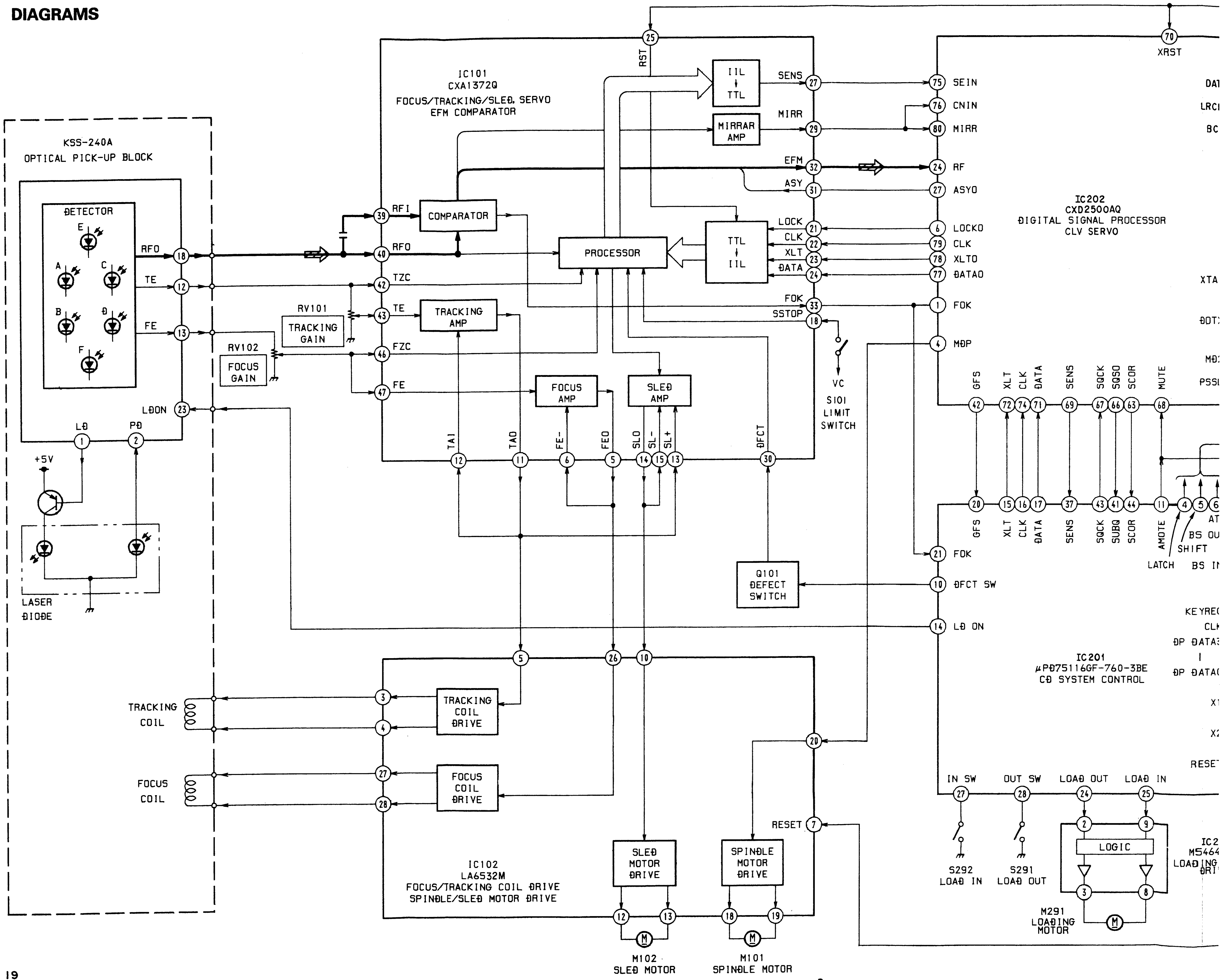
In this mode, it is possible to check the interface between the display micon (IC401) and CD syscon (IC201).

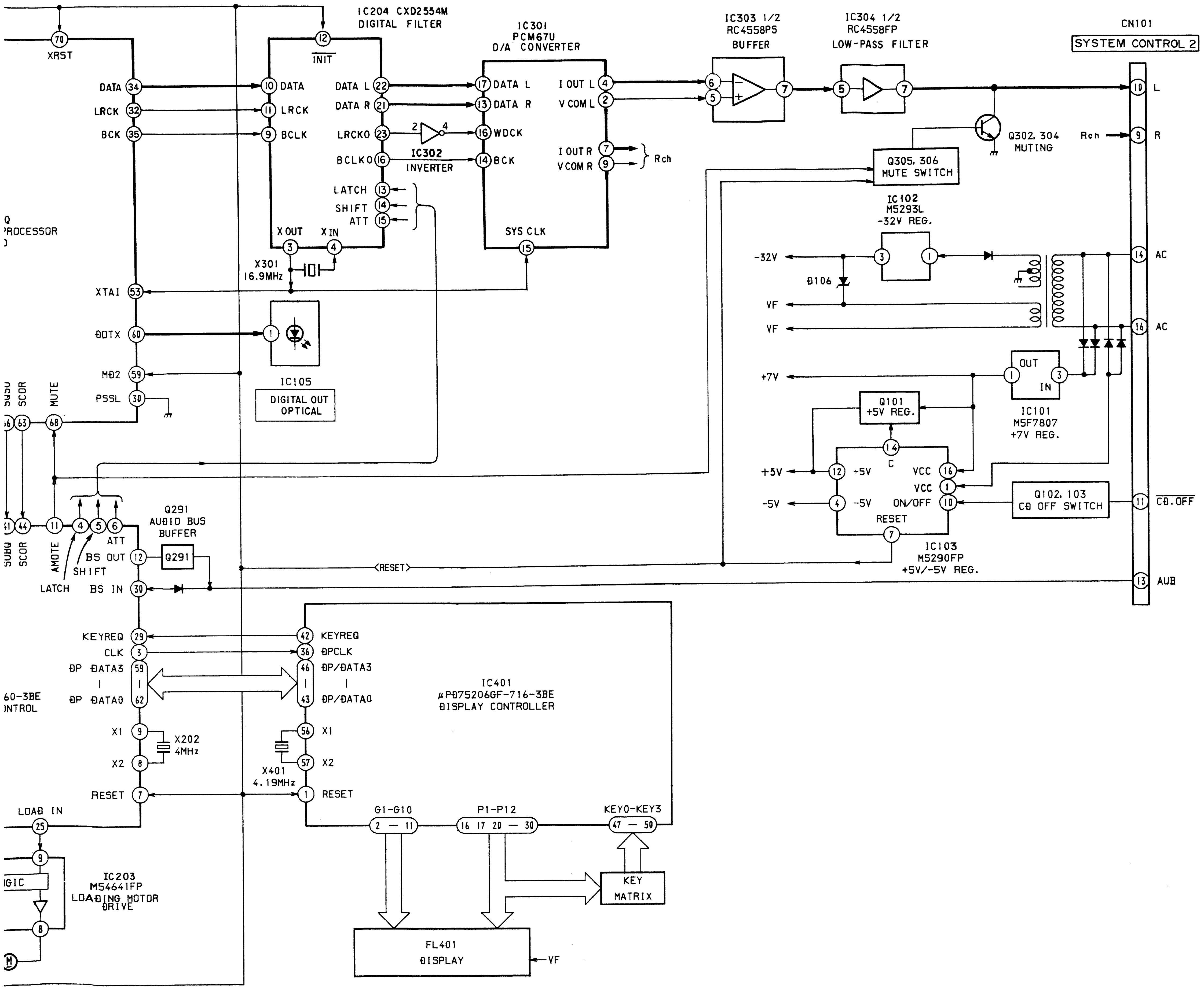
- Set Pin ⑬, IC201 (AFADJ) to "L" before turning ON the POWER switch.

1. Every time the ⏏ key is pressed after turning On the POWER switch, indication on the FL tube is switched correspondingly. Conditions are normal provided the indication repeats the 4 patterns including all lamp ON.

SECTION 2
DIAGRAMS

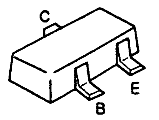
2-1. BLOCK DIAGRAM


KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
E
A
C
B
D
F
RFO
TE
FE
LDON
LD
PD
+5V
LASER
DIODE
TRACKING
COIL
FOCUS
COIL
RV101
TRACKING
GAIN
RV102
FOCUS
GAIN
IC101
CXA1372Q
FOCUS/TRACKING/SLED, SERVO
EFM COMPARATOR
RST
RFI
RFO
TZC
TE
FZC
FE
COMPARATOR
TRACKING
AMP
PROCESSOR
IIL
TTL
MIRRAR
AMP
TTL
IIL
SENS
MIRR
EFM
ASY
LOCK
CLK
XLT
DATA
FOK
SSTOP
FOCUS
AMP
SLED
AMP
TA1
TAO
FE-
FEO
SLO
SL-
SL+
DFCT
VC
S101
LIMIT
SWITCH
Q101
DEFECT
SWITCH
IC102
LA6532M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
TRACKING
COIL
DRIVE
FOCUS
COIL
DRIVE
SLED
MOTOR
DRIVE
SPINDLE
MOTOR
DRIVE
RESET
M
M102
SLED MOTOR
M101
SPINDLE MOTOR
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCKO
CLK
XLTO
DATAO
FOK
MDP
IC202
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MUTE
GFS
XLT
CLK
DATA
SENS
SQCK
SUBQ
SCOR
AMOTE
LATCH
SHIFT
BS OU
BS I
AT
FOK
DFCT SW
LD ON
IC201
µPD75116GF-760-3BE
CD SYSTEM CONTROL
KEYRE
CL
DP DATA3
DP DATA
X1
X2
RESE
DA
LRC
BC
XTA
DOT
MD
PSS
IN SW
OUT SW
LOAD OUT
LOAD IN
S292
LOAD IN
S291
LOAD OUT
LOGIC
M291
LOADING
MOTOR
IC2
M5464
LOADING
DRI

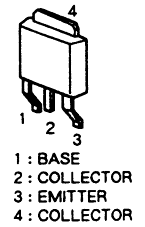

IC204 CXD2554M
DIGITAL FILTER
IC301
PCM67U
D/A CONVERTER
IC303 1/2
RC4558PS
BUFFER
IC304 1/2
RC4558FP
LOW-PASS FILTER
CN101
SYSTEM CONTROL 2
XRST
DATA
LRCK
BCK
INIT
DATA
LRCK
BCLK
DATA L
DATA R
LRCKO
BCLKO
IC302
INVERTER
DATA L
DATA R
WDCK
BCK
I OUT L
V COM L
I OUT R
V COM R
Rch
L
R
Rcn
Q302, 304
MUTING
Q305, 306
MUTE SWITCH
LATCH
SHIFT
ATT
X OUT
X IN
SYS CLK
X301
16.9MHz
IC102
M5293L
-32V REG.
Q
PROCESSOR
XTAI
ÐOTX
MÐ2
PSSL
IC105
DIGITAL OUT
OPTICAL
-32V
Ð106
VF
VF
AC
AC
OUT
IN
+7V
IC101
M5F7807
+7V REG.
Q101
+5V REG.
C
+5V
+5V
VCC
VCC
-5V
-5V
ON/OFF
RESET
Q102, 103
CÐ OFF SWITCH
CÐ.OFF
IC103
M5290FP
+5V/-5V REG.
AUÐ
SCOR
MUTE
AMOTE
SCOR
ATT
Q291
AUÐIO BUS
BUFFER
BS OUT
SHIFT
LATCH
BS IN
Q291
RESET
KEYREQ
CLK
ÐP ÐATA3
ÐP ÐATA0
60-3BE
NTROL
X1
X2
X202
4MHz
RESET
KEYREQ
ÐPCLK
ÐP/ÐATA3
ÐP/ÐATA0
IC401
µPÐ75206GF-716-3BE
ÐISPLAY CONTROLLER
X1
X2
X401
4.19MHz
RESET
G1-G10
P1-P12
KEY0-KEY3
LOAÐ IN
IGIC
IC203
M54641FP
LOAÐING MOTOR
ÐRIVE
M
KEY
MATRIX
FL401
ÐISPLAY
VF

2-2. SEMICONDUCTOR LEAD LAYOUTS

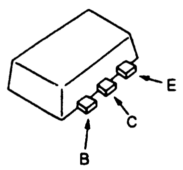
DTC144EK
2SA1162-G
2SC3052-EF
2SC3624A-L15



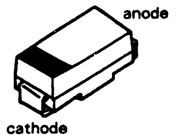
2SA1341


4
1
2
3
1 : BASE
2 : COLLECTOR
3 : EMITTER
4 : COLLECTOR

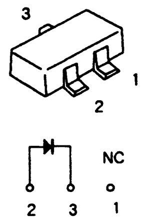
2SB1122-S



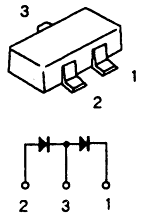
EC10DS2
EC10QS-04


anode
cathode

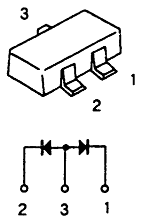
RD3.9M-B2
RD6.8M-B2
RD8.2M-B3



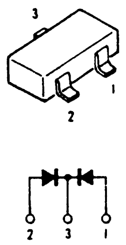
1SS226



1S2836



MA152WK



• SEMICONDUCTOR LOCATION

EXCEPT BD BOARD

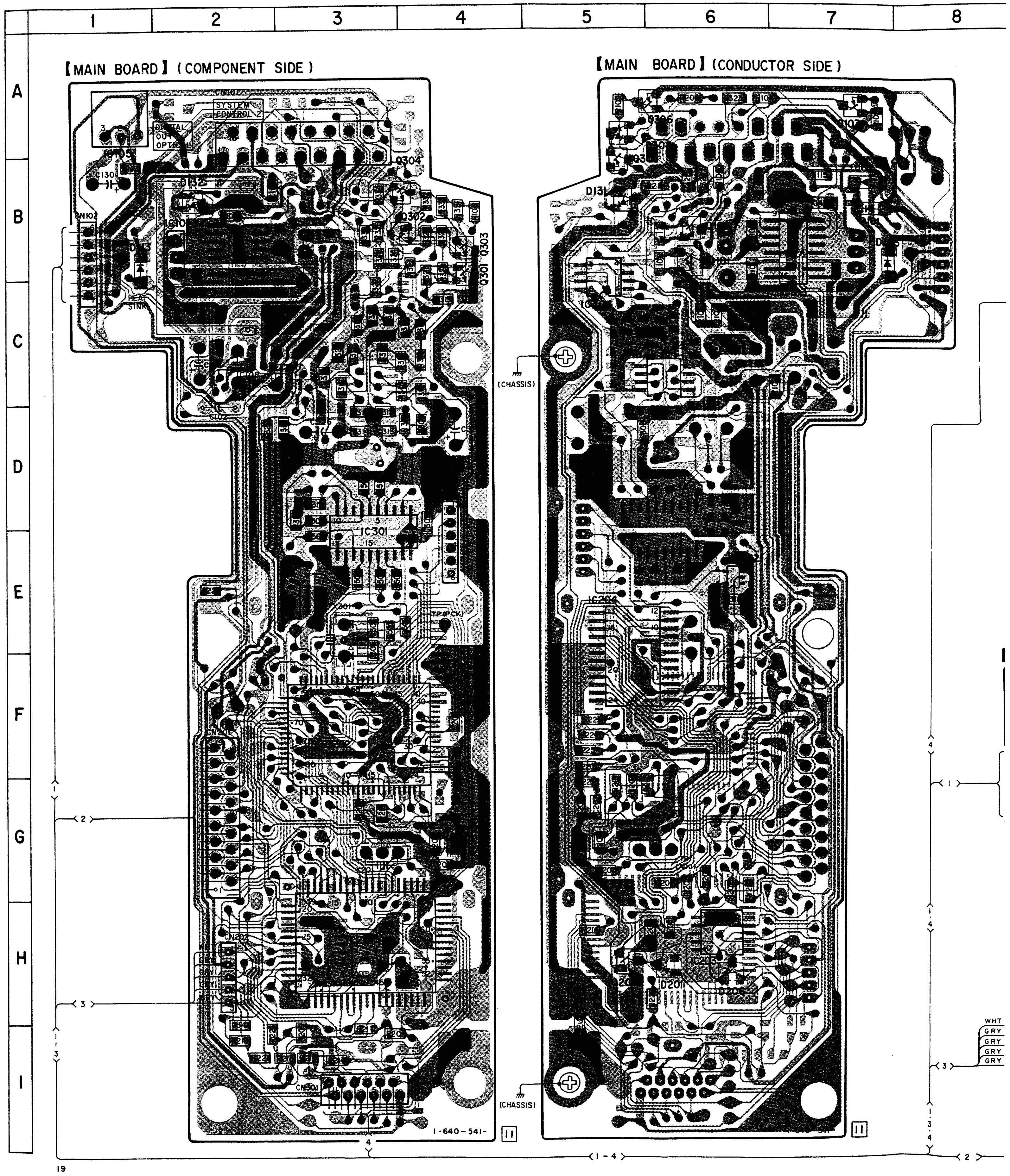
Ref. No.	LOCATION
D101	B-7
D102	B-7
D103	B-7
D104	G-11
D106	F-10
D113	B-1
D131	B-5
D132	B-2
D201	H-6
D206	H-6
D302	A-5
D401	C-13
D402	D-10
D403	C-16
IC101	B-2
IC102	G-9
IC103	B-7
IC105	A-1
IC201	H-3
IC202	F-3
IC203	H-6
IC204	E-5
IC301	D-3
IC302	E-6
IC303	C-6
IC304	B-5
IC401	C-15
Q101	B-6
Q102	B-6
Q103	A-7
Q201	H-5
Q301	B-4
Q302	B-3
Q303	B-4
Q304	B-3
Q305	B-5
Q306	A-5

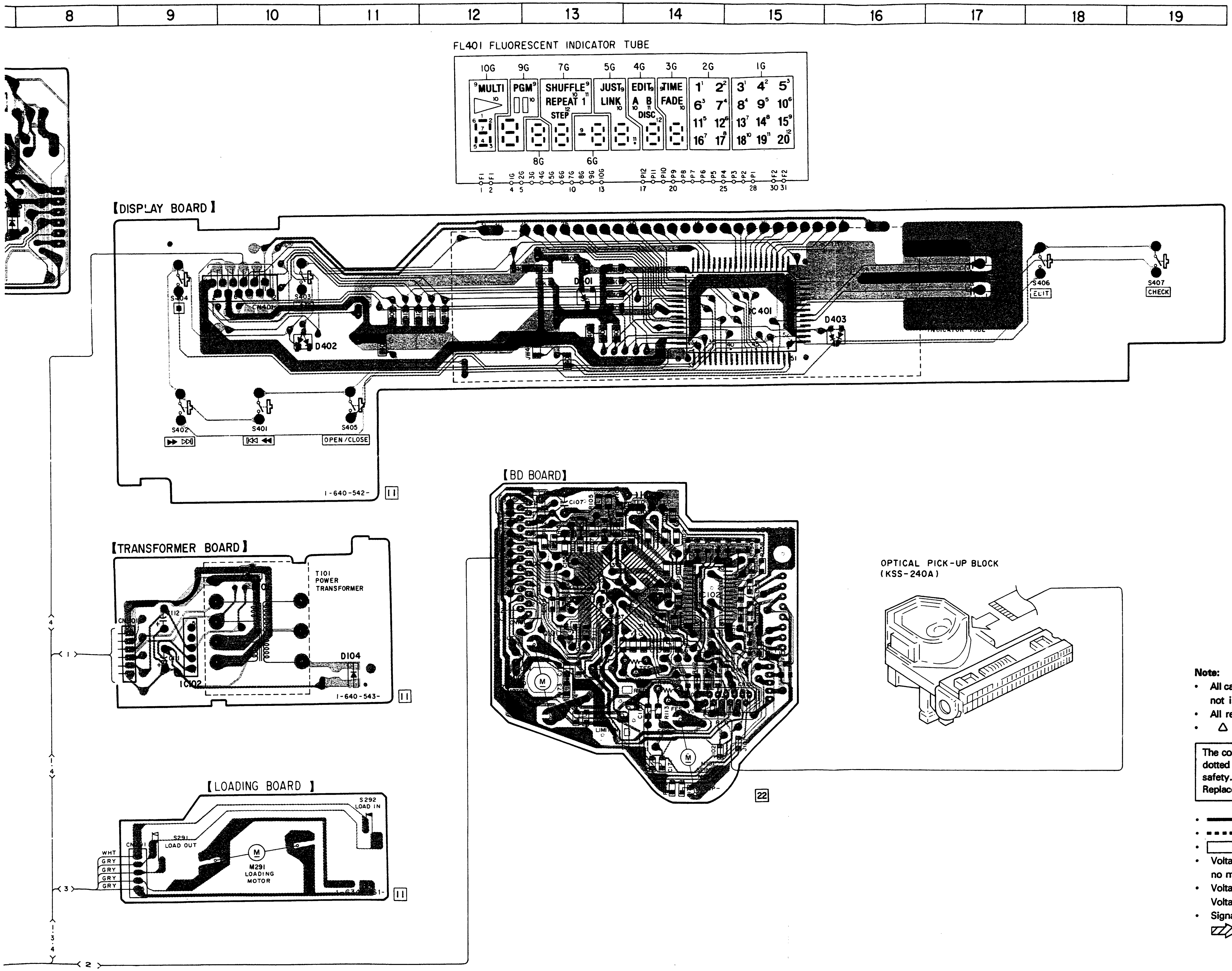
BD BOARD

Ref. No.	LOCATION
IC101	F-13
IC102	F-14
Q101	F-13

Note:
- o—— : indicated a lead wire mounted on the component side.
- •—— : indicated a lead wire mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

2-3. PRINTED WIRING BOARDS


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
【MAIN BOARD】(COMPONENT SIDE)
【MAIN BOARD】(CONDUCTOR SIDE)
SYSTEM CONTROL 2
DIGITAL OUT OPTICAL
CN101
CN102
IC105
C130
D132
IC101
HEAT SINK
Q304
Q302
Q303
Q301
IC301
IC201
CN201
CN301
D131
D
IC204
IC203
D201
D206
(CHASSIS)
(CHASSIS)
1-640-541-
II
II
WHT
GRY
GRY
GRY
GRY
2
3
4
1
1-4
19


8
9
10
11
12
13
14
15
16
17
18
19
FL401 FLUORESCENT INDICATOR TUBE
10G
9G
7G
5G
4G
3G
2G
1G
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
8G
6G
【DISPLAY BOARD】
S404
S403
CN401
D402
D401
IC401
D403
S406
EDIT
S407
CHECK
S402
S401
S405
OPEN/CLOSE
1-640-542-
11
【TRANSFORMER BOARD】
T101
POWER
TRANSFORMER
CN101
IC102
D104
1-640-543-
11
【LOADING BOARD】
S292
LOAD IN
S291
LOAD OUT
M291
LOADING
MOTOR
WHT
GRY
GRY
GRY
GRY
11
【BD BOARD】
C107
IC102
22
OPTICAL PICK-UP BLOCK
(KSS-240A)
1
2
3
4

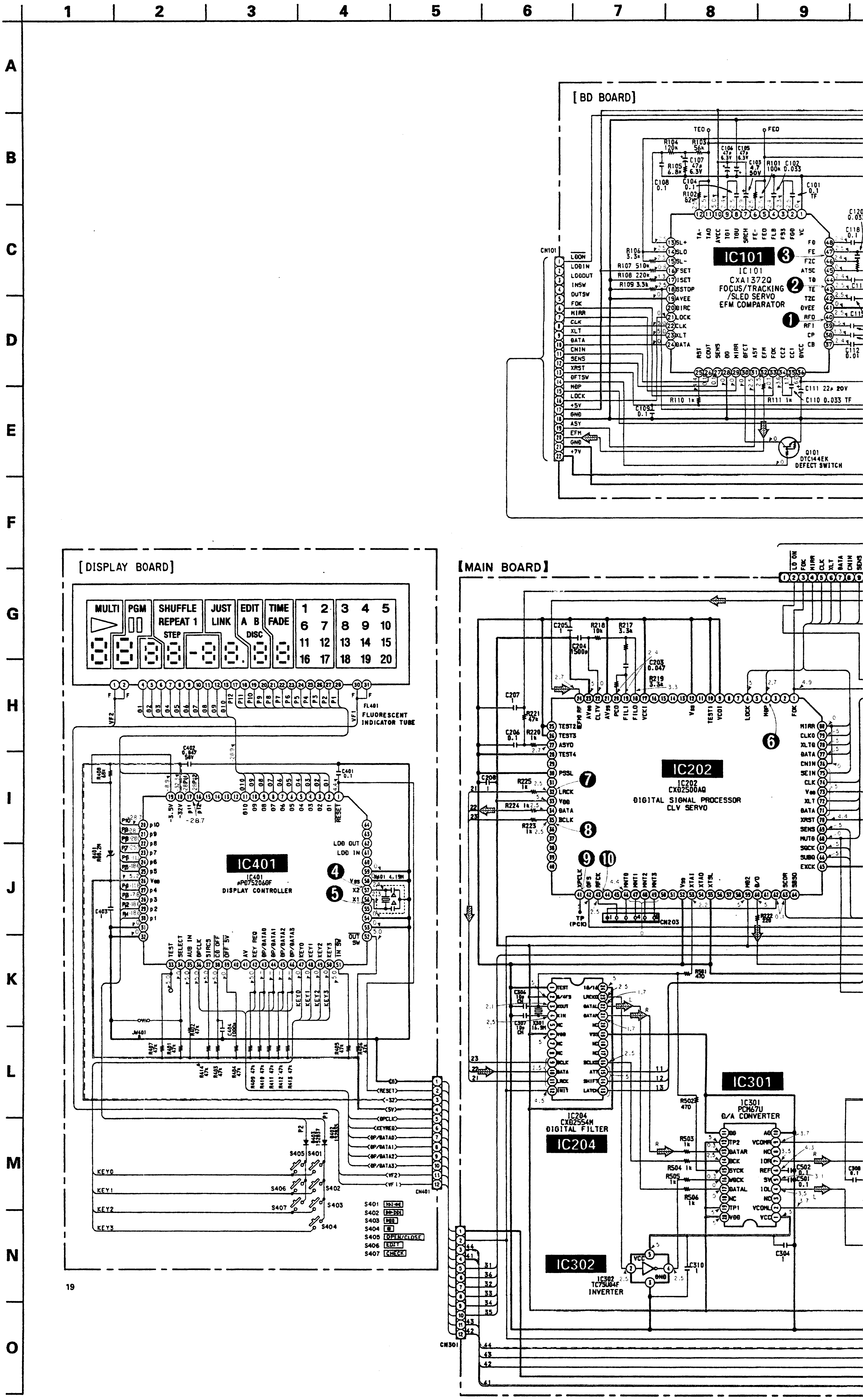
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : internal component.

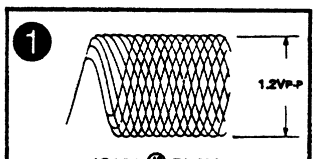
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬▬ : B + Line.
- ■ ■ ■ ■ : B – Line.
- ☐ : adjustment for repair.
- Voltages are DC between measurement points and ground.
  no mark : PLAY
- Voltages are taken with a VOM (input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Signal path
  ⇨ : CD

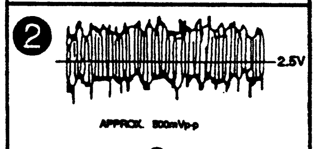
2-4. SCHEMATIC DIAGRAM • See page 12 for note.


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
[BD BOARD]
IC101
CXA1372Q
FOCUS/TRACKING /SLED SERVO
EFM COMPARATOR
CN101
Q101
DTC144EK
DEFECT SWITCH
[DISPLAY BOARD]
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
FL401
FLUORESCENT INDICATOR TUBE
IC401
μPD75206GF
DISPLAY CONTROLLER
CN401
S401 ⏮
S402 ⏭
S403 ⏯
S404 ■
S405 OPEN/CLOSE
S406 EDIT
S407 CHECK
KEY0
KEY1
KEY2
KEY3
19
【MAIN BOARD】
IC202
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
IC204
CXD2554M
DIGITAL FILTER
IC301
PCM67U
D/A CONVERTER
IC302
TC7SU04F
INVERTER
CN203
CN301

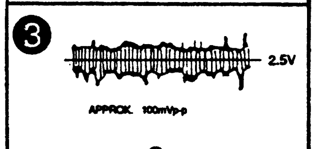
• Waveforms



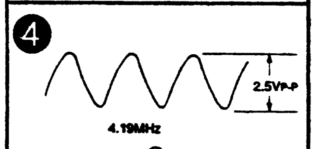
IC101 ㊵ PLAY



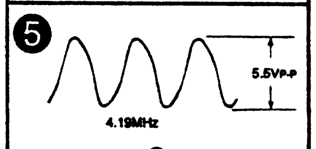
IC101 ㊸ PLAY



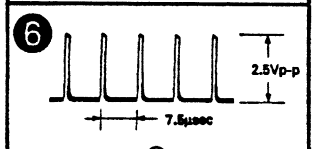
IC101 ㊼ PLAY



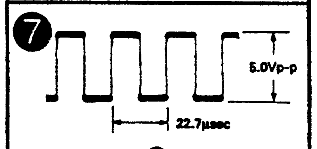
IC401 ㊽



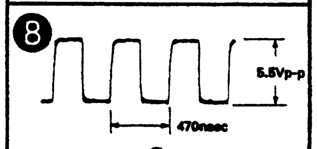
IC401 ㊿



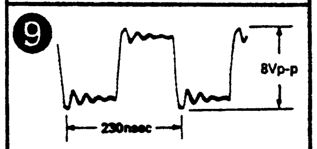
IC202 ④ PLAY



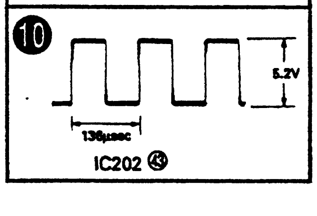
IC202 ㉜



IC202 ㉟

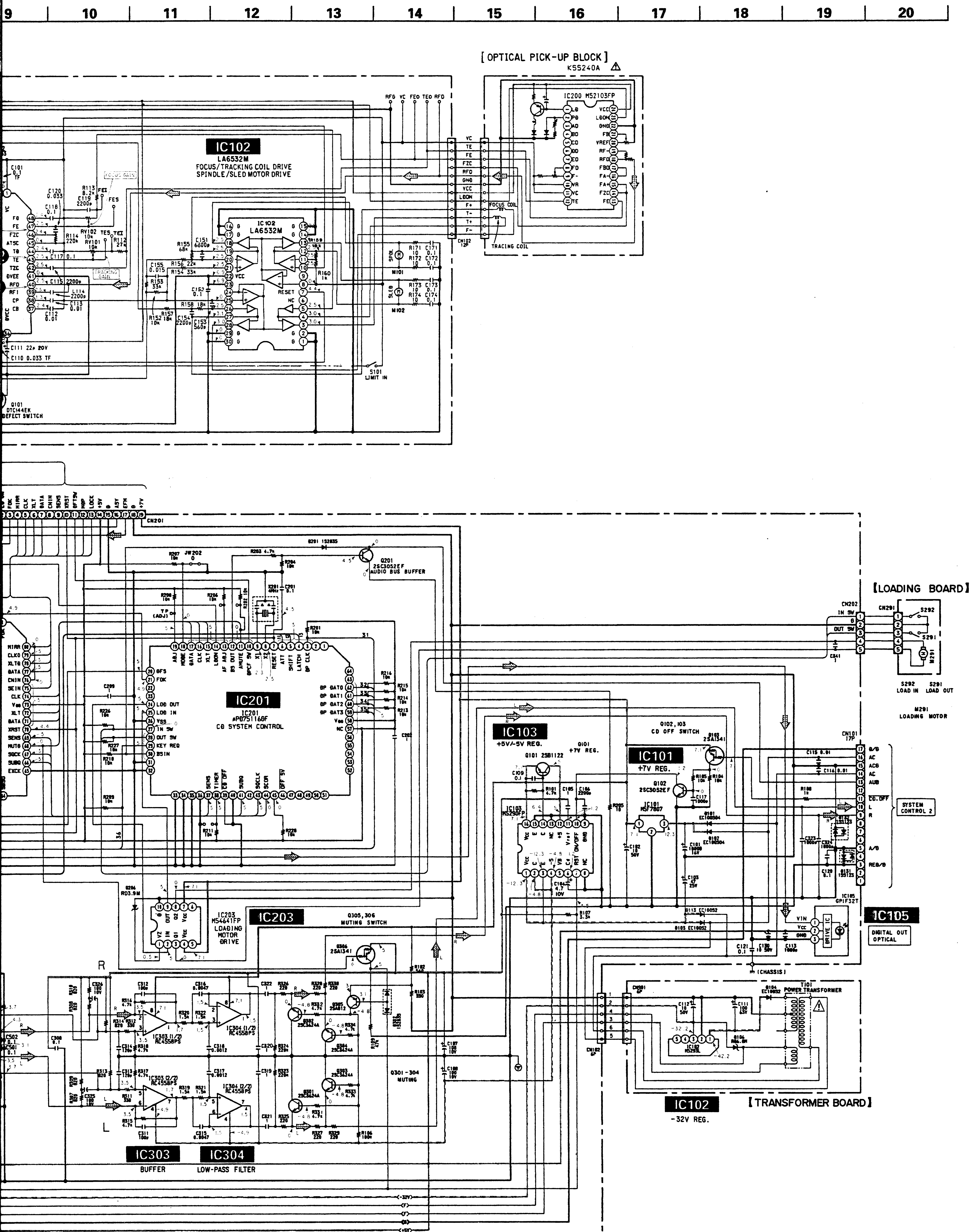


IC202 ㊶ PLAY



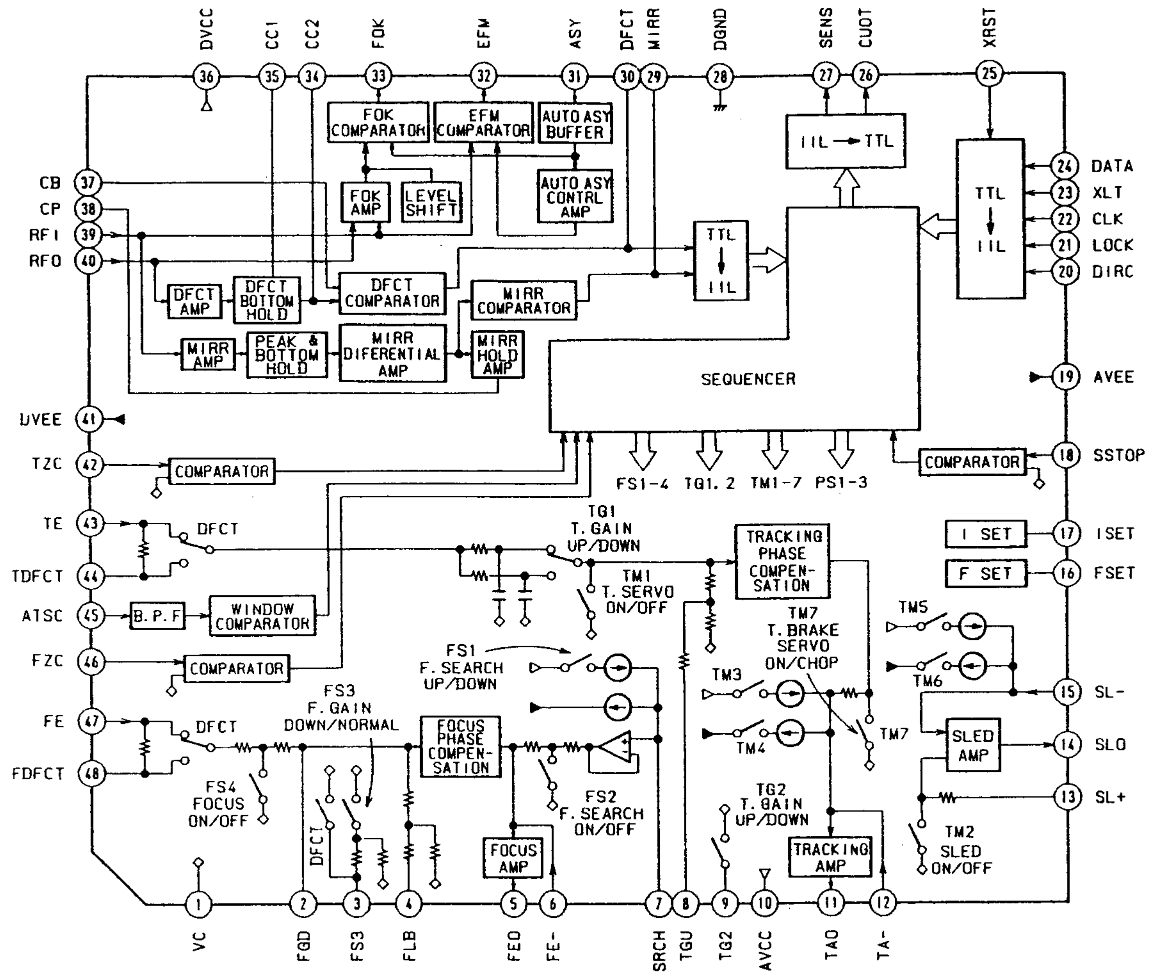
IC202 ㊸

S4PL 1
V13727

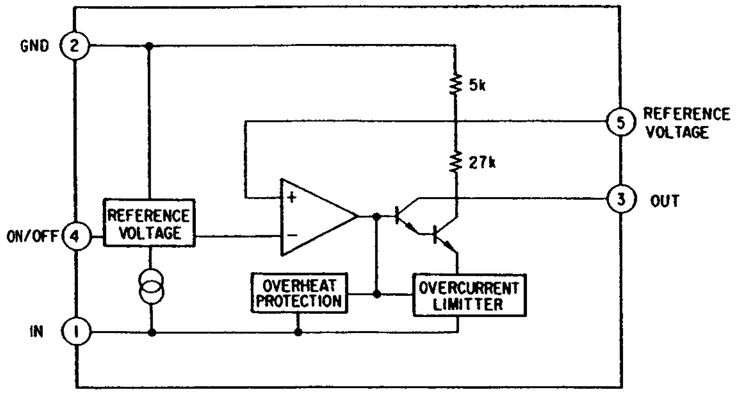

9
10
11
12
13
14
15
16
17
18
19
20
[OPTICAL PICK-UP BLOCK]
KSS240A
IC200 M52103FP
IC102
LA6532M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
FOCUS COIL
TRACING COIL
CN102 12P
M101
M102
S101
LIMIT IN
Q101
DTC144EK
DEFECT SWITCH
CN201
Q201
2SC3052EF
AUDIO BUS BUFFER
IC201
μPD75116GF
CD SYSTEM CONTROL
IC203
M54641FP
LOADING MOTOR DRIVE
Q305, 306
MUTING SWITCH
Q301 - 304
MUTING
IC303
BUFFER
IC304
LOW-PASS FILTER
IC303 (1/2) RC4558PS
IC303 (2/2) RC4558PS
IC304 (1/2) RC4558PS
IC304 (2/2) RC4558PS
R
L
IC103
+5V/-5V REG.
Q101 2SB1122
Q101
+7V REG.
IC101
+7V REG.
IC101 MSF7807
Q102, 103
CD OFF SWITCH
Q102 2SC3052EF
Q103 2SA1341
IC103 M5290FP
[LOADING BOARD]
CN202
CN291
S292
S291
M291
S292 LOAD IN
S291 LOAD OUT
M291 LOADING MOTOR
CN101 17P
SYSTEM CONTROL 2
IC105 GP1F32T
IC105
DIGITAL OUT OPTICAL
DRIVE IC
VIN
Vcc
GND
(CHASSIS)
CN981 6P
CN102 6P
T101 POWER TRANSFORMER
IC102 M5293L
IC102
-32V REG.
[TRANSFORMER BOARD]
(-32V)
(F)
(F)
(B)
(+5V)

2-5. IC BLOCK DIAGRAMS

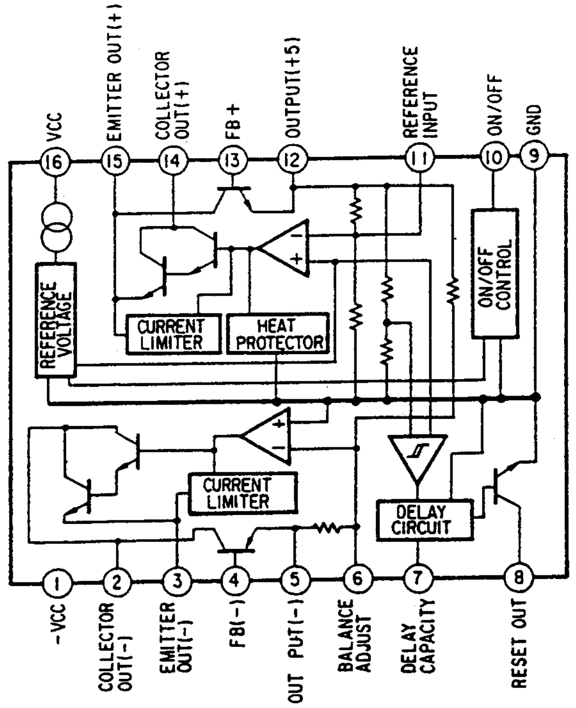
IC101 CXA1372Q


DVCC
CC1
CC2
FOK
EFM
ASY
DFCT
MIRR
DGND
SENS
CUOT
XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
FOK AMP
LEVEL SHIFT
AUTO ASY CONTRL AMP
IIL → TTL
TTL → IIL
DATA
XLT
CLK
LOCK
DIRC
CB
CP
RFI
RFO
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
AVEE
DVEE
TZC
COMPARATOR
SSTOP
FS1-4 TG1, 2 TM1-7 PS1-3
TE
TDFCT
ATSC
FZC
FE
FDFCT
B.P.F
WINDOW COMPARATOR
TG1 T.GAIN UP/DOWN
TM1 T.SERVO ON/OFF
TRACKING PHASE COMPEN-SATION
I SET
F SET
ISET
FSET
TM5
TM6
TM7 T.BRAKE SERVO ON/CHOP
TM3
TM4
FS1 F.SEARCH UP/DOWN
FS3 F.GAIN DOWN/NORMAL
FOCUS PHASE COMPEN-SATION
FS2 F.SEARCH ON/OFF
FS4 FOCUS ON/OFF
SLED AMP
SL-
SLO
SL+
TG2 T.GAIN UP/DOWN
TM2 SLED ON/OFF
FOCUS AMP
TRACKING AMP
VC
FGD
FS3
FLB
FEO
FE-
SRCH
TGU
TG2
AVCC
TAO
TA-

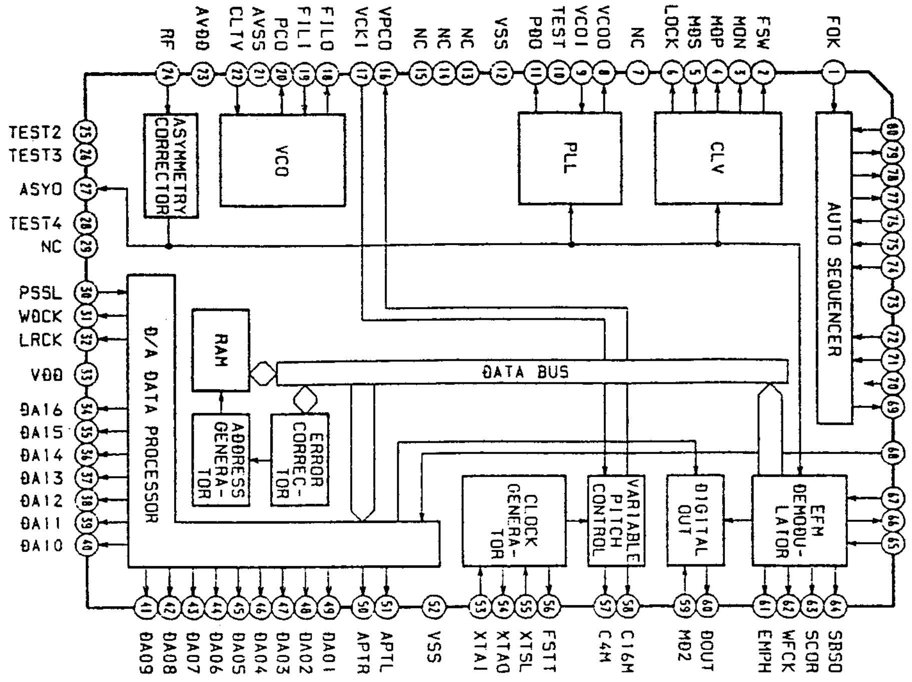
IC102 M5293L


GND
ON/OFF
IN
REFERENCE VOLTAGE
5k
27k
REFERENCE VOLTAGE
OUT
OVERHEAT PROTECTION
OVERCURRENT LIMITTER

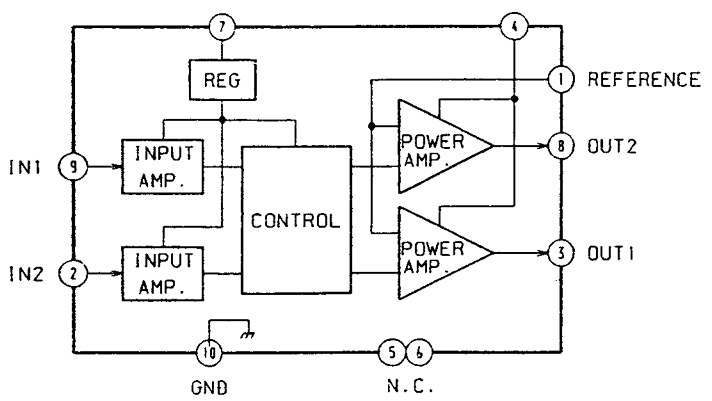
IC103 M5290FP


VCC
EMITTER OUT(+)
COLLECTOR OUT(+)
FB+
OUTPUT(+5)
REFERENCE INPUT
ON/OFF
GND
REFERENCE VOLTAGE
CURRENT LIMITER
HEAT PROTECTOR
ON/OFF CONTROL
CURRENT LIMITER
DELAY CIRCUIT
-VCC
COLLECTOR OUT(-)
EMITTER OUT(-)
FB(-)
OUT PUT(-)
BALANCE ADJUST
DELAY CAPACITY
RESET OUT

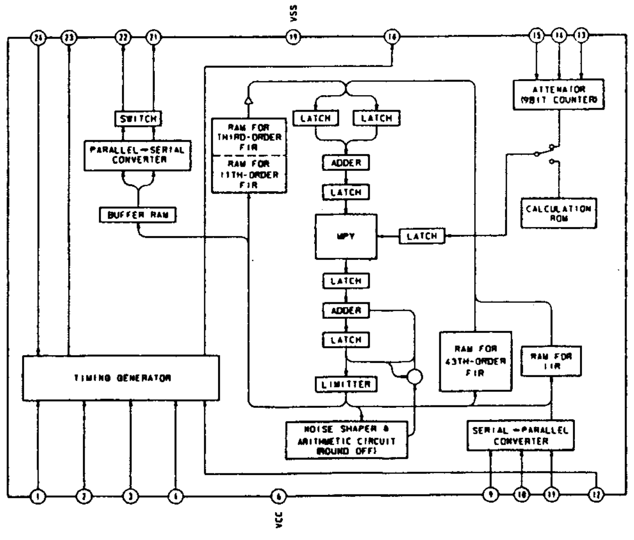
IC202 CXD2500AQ


RF
AVDD
AVSS
CLTV
AVSS
PCO
FILI
FILO
VPCO
VCKI
NC
NC
NC
VSS
PDO
TEST
VCOI
VCOO
NC
LOCK
MDS
MDP
MON
FSW
FOK
TEST2
TEST3
ASYO
TEST4
NC
ASYMMETRY CORRECTOR
VCO
PLL
CLV
AUTO SEQUENCER
MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10
D/A DATA PROCESSOR
RAM
DATA BUS
ADDRESS GENERA-TOR
ERROR CORREC-TOR
CLOCK GENERA-TOR
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODU-LATOR
DA09
DA08
DA07
DA06
DA05
DA04
DA03
DA02
DA01
APTR
APTL
VSS
XTAI
XTAO
XTSL
FSTT
C4M
C16M
MD2
DOUT
EMPH
WFCK
SCOR
SBSO

IC203 M54641FP


VCC
VCC
REG
REFERENCE
INPUT AMP.
CONTROL
POWER AMP.
OUT2
IN1
IN2
INPUT AMP.
POWER AMP.
OUT1
GND
N.C.

IC204 CXD2554M


VSS
SWITCH
PARALLEL→SERIAL CONVERTER
BUFFER RAM
RAM FOR THIRD-ORDER FIR
RAM FOR 11TH-ORDER FIR
LATCH
LATCH
ADDER
LATCH
MPY
LATCH
LATCH
ADDER
LATCH
LIMITTER
ATTENATOR (9BIT COUNTER)
CALCULATION ROM
RAM FOR 43TH-ORDER FIR
RAM FOR IIR
TIMING GENERATOR
NOISE SHAPER & ARITHMETIC CIRCUIT (ROUND OFF)
SERIAL → PARALLEL CONVERTER
VDD

2-6. PI

- IC201

Functions
CD unit, c

Pin N
1-2
3
4-6
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22 - 2
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31 - 3
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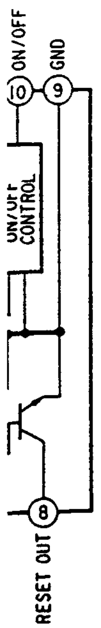
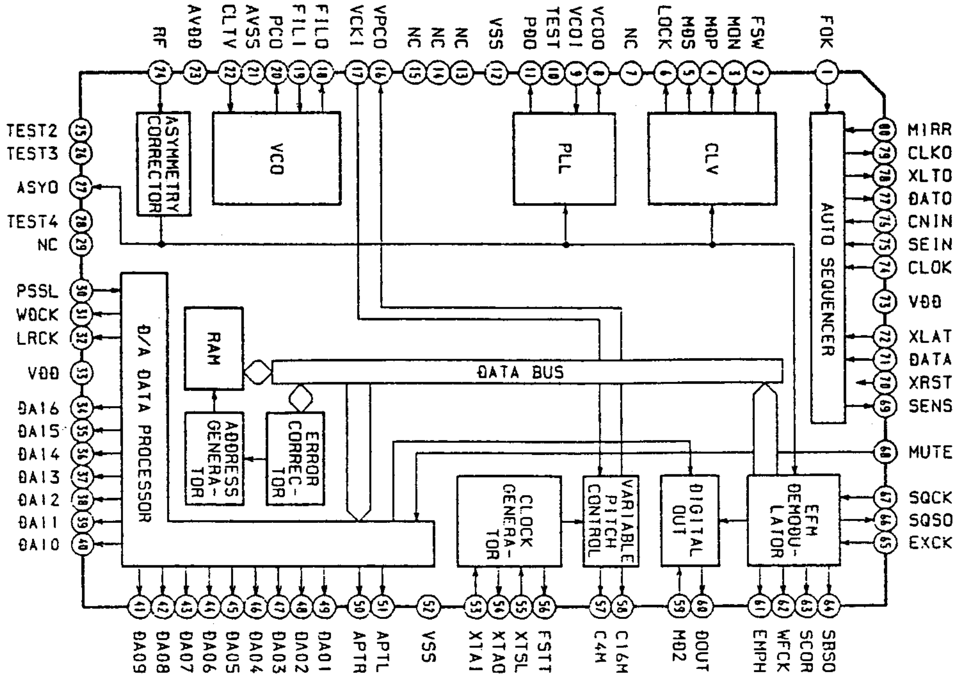
45 - 5
57
58
59 - 6
63 - 6

*1 Loadin

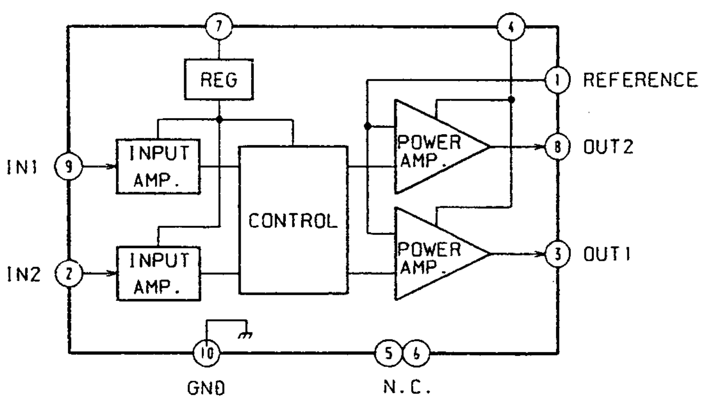
LODOU
LODIN


ON/OFF
GND
ON/OFF CONTROL
RESET OUT
10
9
8

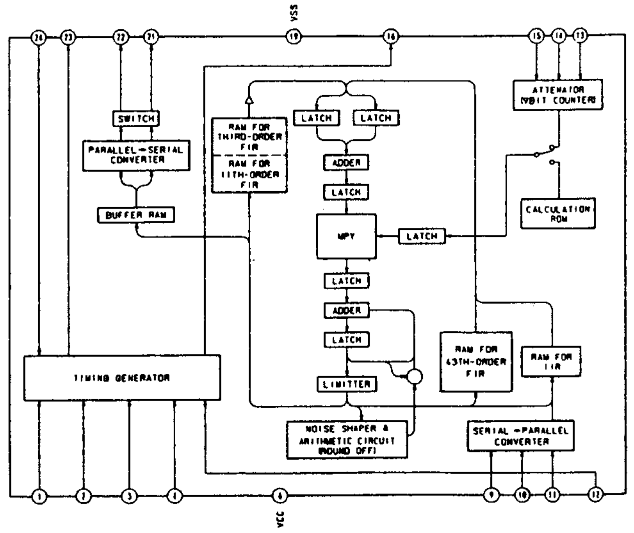
IC202 CXD2500AQ


RF
AVDD
CLTV
AVSS
PCO
FILI
FILO
VCKI
VPCO
NC
NC
NC
VSS
PDO
TEST
VCOI
VCOO
NC
LOCK
MDS
MDP
MON
FSW
FOK
TEST2
TEST3
ASYO
TEST4
NC
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10
ASYMMETRY CORRECTOR
VCO
PLL
CLV
AUTO SEQUENCER
D/A DATA PROCESSOR
RAM
ADDRESS GENERATOR
ERROR CORRECTOR
DATA BUS
CLOCK GENERATOR
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODULATOR
MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
DA09
DA08
DA07
DA06
DA05
DA04
DA03
DA02
DA01
APTR
APTL
VSS
XTAI
XTAO
XTSL
FSTT
C4M
C16M
MD2
DOUT
EMPH
WFCK
SCOR
SBSO

IC203 M54641FP


VCC
VCC
REG
INPUT AMP.
INPUT AMP.
CONTROL
POWER AMP.
POWER AMP.
REFERENCE
OUT2
OUT1
IN1
IN2
GND
N.C.

IC204 CXD2554M


VSS
SWITCH
PARALLEL→SERIAL CONVERTER
BUFFER RAM
RAM FOR THIRD-ORDER FIR
RAM FOR 11TH-ORDER FIR
LATCH
LATCH
ADDER
LATCH
MPY
LATCH
LATCH
ADDER
LATCH
LIMITTER
ATTENATOR (9BIT COUNTER)
CALCULATION ROM
RAM FOR 43TH-ORDER FIR
RAM FOR FIR
TIMING GENERATOR
NOISE SHAPER & ARITHMETIC CIRCUIT (ROUND OFF)
SERIAL→PARALLEL CONVERTER
VCC

2-6. PIN FUNCTIONS OF IC201 AND IC401

- **IC201 CD System Controller (µPD75116GF-760-3BE)**

Functions effected by the captioned controller include IC101 (RF signal processing, servo), IC202 (DSP, digital filter) and loading control in the CD unit, data exchange with IC401 (display controller), audio bus entry, etc.

Pin No.	Pin Name	I/O	Description
1-2		O	Not in use with the model (open).
3	DPCLK	O	Display data transfer clock output to IC401 (display micon)
4-6		O	IC204 (CXD2554M) control output.
7	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
8	X2	I	Clock input
9	X1	I	Clock input (4 MHz)
10	DFCT SW	O	DEFECT circuit ON/OFF switching output of IC101 (CXA1372Q). It is turned OFF ("H") to focus-search the DISC flaw detection circuit.
11	AMUTE	O	Muting control output. "H": Mute
12	BSOUT	O	Audio bus output
13	AFADJ	I	Test mode input. Various test operations are effected upon "L" after turning ON the POWER.
14	LDON	O	Optical pickup laser diode ON/OFF switching output. "H": ON
15	XLT	O	Serial data latch output to IC202 (CXD2500AQ)
16	CLK	O	Serial data transfer clock output to IC202 (CXD2500AQ)
17	DATA	O	Serial data output to IC202 (CXD2500AQ)
18	MODE	I	Not in use with the model (GND)
19	ADJ	I	Test mode input. Upon "L," GFS checking is disabled while continuously rotating the spindle no matter whether frame synch is issued during PLAY, PAUSE or SEARCH.
20	GFS	I	GFS signal input from IC202 (CXD2500AQ). "L": NG "H": OK
21	FOK	I	Focus OK signal input from IC101 (CXA1372Q). "H": OK
22 - 23		O	Not in use with the model (open)
24	LODOUT	O	Output to rotate M291 (loading motor) in the loading out direction. *1
25	LODIN	O	Output to rotate M291 (loading motor) in the loading in direction. *1
26	Vss	–	Power terminal (GND)
27	$\overline{\text{IN SW}}$	I	S292 (Loading in switch) input
28	$\overline{\text{OUT SW}}$	I	S291 (Loading out switch) input
29	KEY REQ	I	Key data request input from IC401 (display controller)
30	BS IN	I	Audio bus input
31 - 36			Not in use with the model (GND)
37	SENS	I	SENS input from IC101 (CXA1372Q) and IC202 (CXD2500AQ)
38	$\overline{\text{TIMER}}$	I	Not in use with the model (pull up)
39	D/F 16BIT	I	IC202 (CXD2500AQ) digital filter mode setting input. It is fixed at 16 bit, 4fs with
		I	the model (pull up).
40			Not in use with the model (GND)
41	SUBQ	I	Subcode Q data input from IC202 (CXD2500AQ)
42		O	Not in use with the model (open)
43	SQCLK	O	Subcode Q data readout clock output to IC202 (CXD2500AQ)
44	SCOR	I	Subcode sync S0 + S1 detection input from IC202 (CXD2500AQ)
45 - 56		O	Not in use with the model (open)
57	N.C.	I	Not in use with the model (+5V)
58	V_{DD}	–	Power terminal (+5V)
59 - 62	DPDATA3-0	I/O	Key data input and display data output with IC401 (display controller)
63 - 64		O	Not in use with the model (open)

*1 Loading motor control

	IN	OUT	BRAKE
LODOUT ㉔	L	H	H
LODIN ㉕	H	L	H

- **IC401 Display controller (μPD75206GF-716-3BE)**

In charge of displaying the FL tube and keying in, it exchanges data with the IC201 (CD system controller) in 4-bit parallel mode.

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
2 - 11	G1-10	O	Digital output to the FL tube
12 - 15		O	Not in use with the model (open)
16, 17	l, k	O	FL tube segment output
18	VLOAD	–	Power supply for the FL tube controller (builtin) (-32V)
19	VPRE	–	Power supply for the FL tube predriver (-3.5V)
20 - 25	j ~ e	O	FL tube segment output
26	VDD	–	Power terminal (+5V)
27, 28	d, c	O	FL tube segment output
29, 30	b, a	O	FL tube segment, key scan output
31, 32		I	Not in use with the model (GND)
33	$\overline{\text{TEST}}$	I	Test mode input. "L": Test mode
34	SELECT	I	Not in use with the model (pull up)
35	BSIN	I	Not in use with the model (pull up)
36	DPCLK	I	Display data transfer clock input from IC201 (CD system controller)
37, 38		I	Not in use with the model (pull up)
39		O	Not in use with the model (pull up)
40, 41		O	Not in use with the model (open)
42	KEY REQ	O	Key data request output to IC201 (CD system controller)
43 - 46	DPDATA0-3	I/O	Key data output and display data input with IC201 (CD system controller)
47 - 50	KEY0-3	I	Key data input
51, 52		I	Not in use with the model (pull up)
53, 54		I	Not in use with the model (GND)
55		O	Not in use with the model (open)
56	X1	I	System clock input (4.19 MHz)
57	X2	I	System clock input
58	Vss	–	Power supply terminal (GND)
59		I	Not in use with the model (GND)
60 - 64		O	Not in use with the model (open)

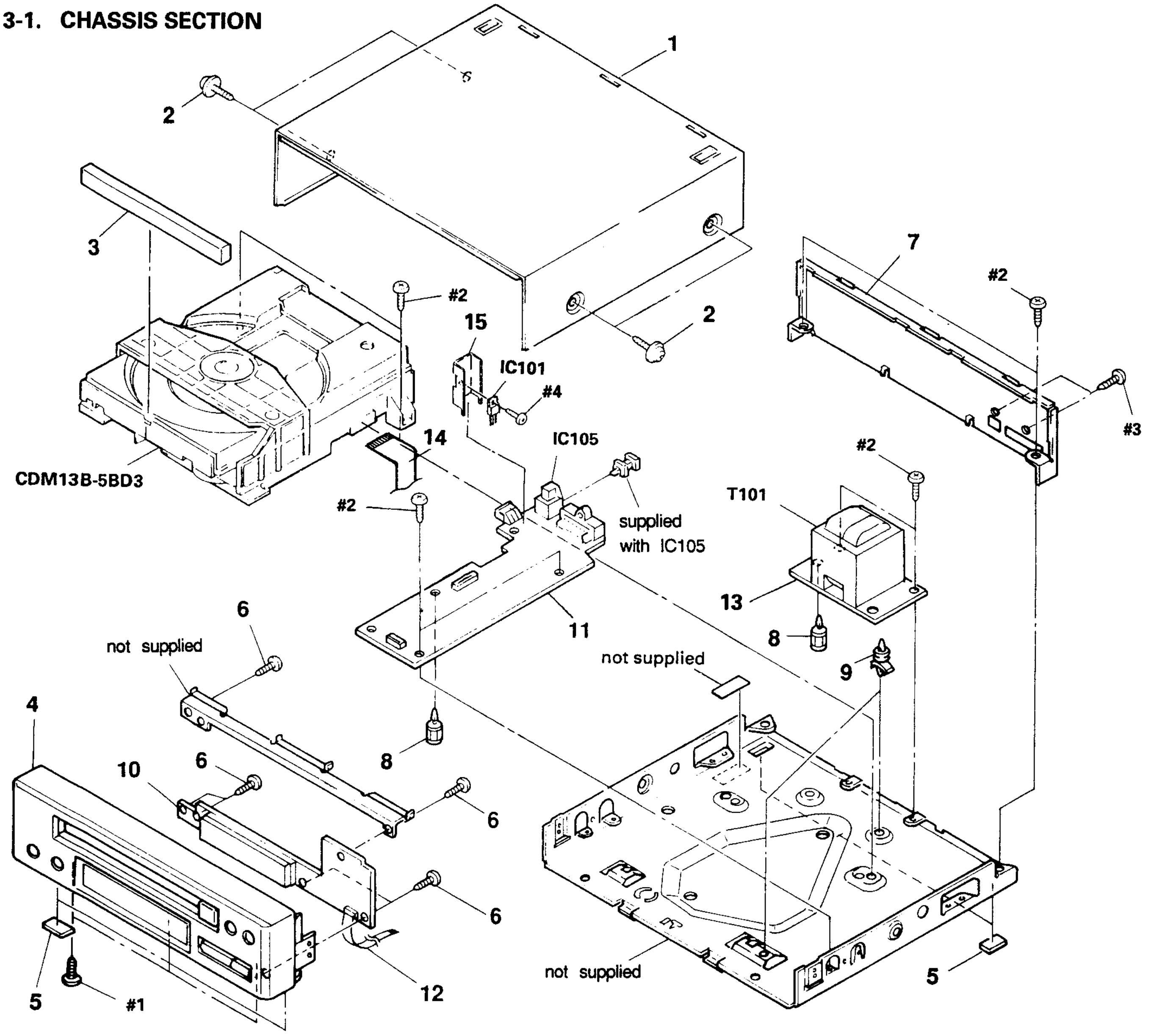
SECTION 3
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(# mark) list is given in the last of this parts list.

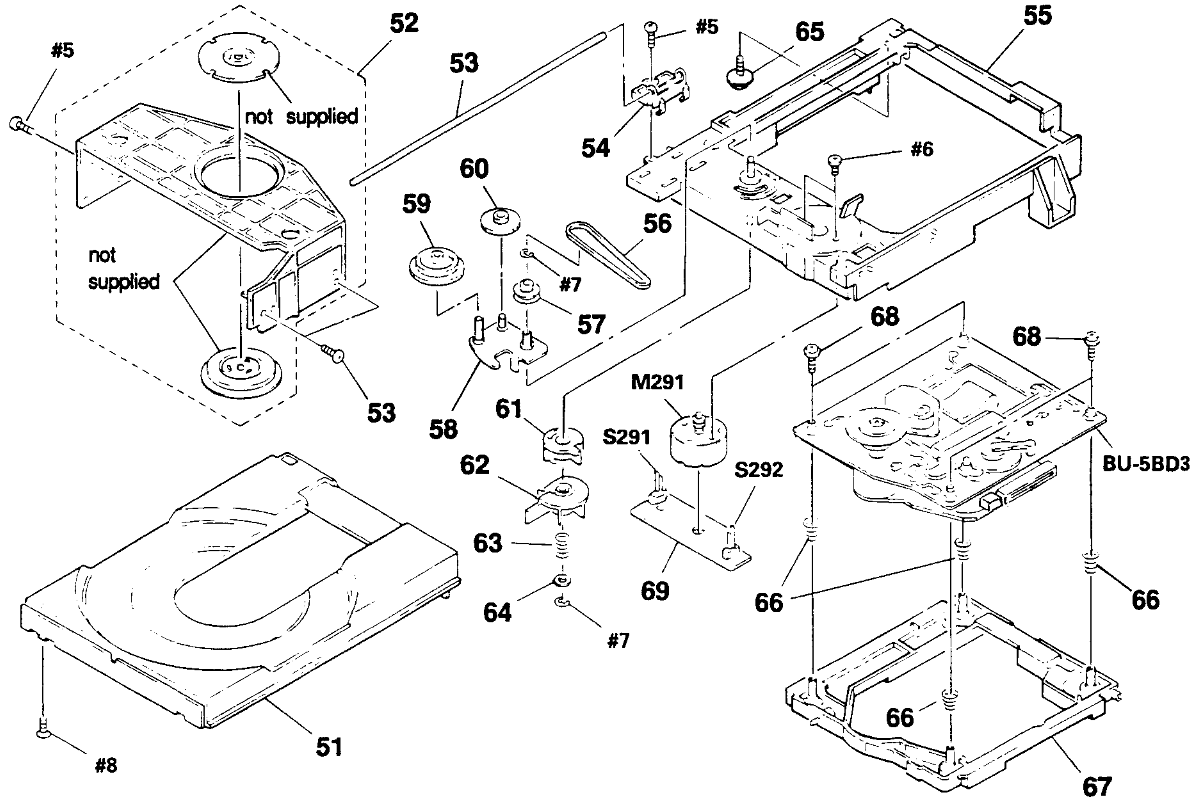
The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

3-1. CHASSIS SECTION


1
2
3
CDM13B-5BD3
#2
15
IC101
#4
14
IC105
supplied with IC105
#2
2
7
#2
#3
#2
T101
13
8
9
11
not supplied
6
not supplied
4
10
6
8
6
6
5
#1
12
not supplied
5

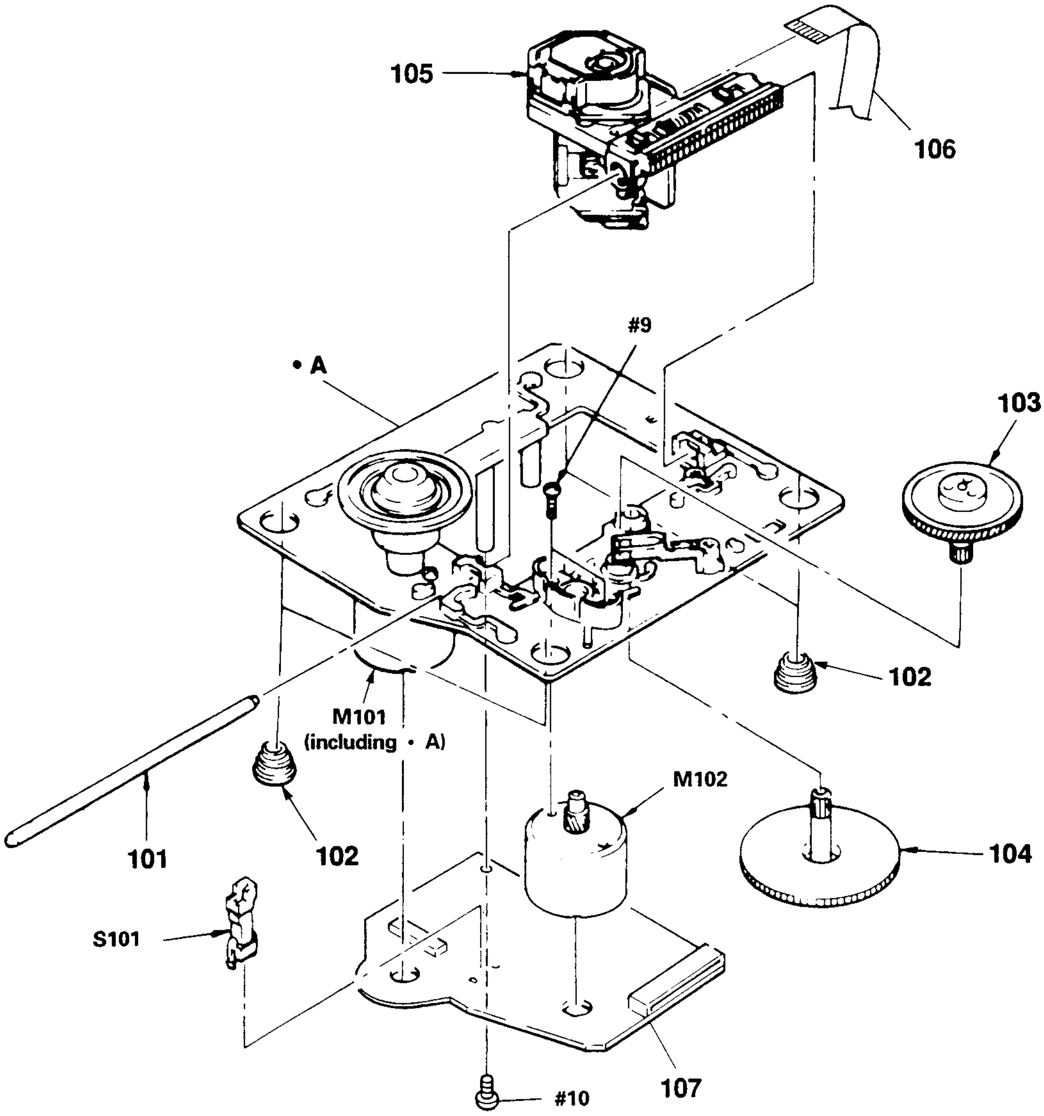
Ref. No.	Part No.	Description	Remarks
1	* 4-944-423-01	CASE (K206522)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	4-944-417-01	PANEL, LOADING	
4	X-4941-522-1	PANEL ASSY, FRONT	
5	4-930-336-01	FOOT (FELT)	
6	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
7	* 4-943-175-41	PAENL, BACK	
8	* 3-669-610-00	SPACER	
9	* 4-924-098-11	HOLDER, PC BOARD	
10	* A-4617-966-A	DISPLAY BOARD, COMPLETE	
11	* A-4617-963-A	MAIN BOARD, COMPLETE	
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	* 1-640-543-11	TRANSFORMER BOARD	
14	1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
15	* 4-880-403-11	HEAT SINK	

3-2. CD MECHANISM SECTION (CDM13B-5BD3)


#5
52
53
not supplied
not supplied
60
59
56
#7
57
58
53
61
62
63
64
#7
51
#8
#5
54
65
55
#6
68
68
M291
S291
S292
BU-5BD3
69
66
66
66
67

Ref. No.	Part No.	Description	Remarks
51	4-944-012-01	TABLE, DISC	
52	A-4604-752-A	HOLDER (MG) ASSY	
53	4-929-764-01	SHAFT (TABLE GUIDE)	
54	4-944-006-01	BEARING	
55	X-4941-462-1	CHASSIS (MD) ASSY	
56	4-927-649-01	BELT	
57	4-929-724-01	PULLEY (B)	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-11	GEAR (P)	
60	4-927-628-01	GEAR (C)	
61	4-929-727-01	CAM (A)	
62	4-929-729-01	CAM (B)	
63	3-659-338-00	SPRING, COMPRESSION	
64	4-927-654-01	WASHER (LIMITER)	
65	* 4-917-583-21	BRACKET, YOKE	
66	4-917-541-01	SPRING (B)	
67	4-929-747-01	HOLDER (BU)	
68	4-933-134-01	SCREW (+PTPWH M2.6X6)	
69	* 1-634-461-11	LOADING BOARD	
M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

3-3. OPTICAL PICK-UP BLOCK (BU-5BD3)


105
106
#9
• A
103
102
M101
(including • A)
M102
101
102
104
S101
#10
107

Ref. No.	Part No.	Description	Remarks
101	4-917-565-01	SHAFT, SLED	
102	4-933-126-01	INSULATOR (A)	
103	4-917-567-01	GEAR (M)	
104	4-917-564-01	GEAR (P), FLATNESS	
105 ⚠	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
107	* A-4617-371-A	BD BOARD, COMPLETE	
M101	X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102	X-4917-504-1	ASSY, MOTOR (SLED)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 4
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF :μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remarks
	* A-4617-371-A	BD BOARD, COMPLETE ******************			
		(CAPACITOR)			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-163-11	ELECT	4.7uF	20%	50V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		(CONNECTOR)			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		(IC)			
IC101	8-752-050-82	IC CXA1372Q			
IC102	8-759-822-36	IC LA6532M			
		(CHIP JUMPER)			
J101	1-216-295-00	METAL CHIP	0	5%	1/10W
J102	1-216-295-00	METAL CHIP	0	5%	1/10W
		(TRANSISTOR)			
Q101	8-729-901-01	TRANSISTOR DTC144EK			
		(RESISTOR)			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W

BD MAIN DISPLAY TRANSFORMER

(VARIABLE RESISTOR)

Ref. No.	Part No.	Description	Remarks
RV101	1-238-016-11	RES, ADJ, CARBON 10K	
RV102	1-238-016-11	RES, ADJ, CARBON 10K	

(SWITCH)

Ref. No.	Part No.	Description	Remarks
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

****

* A-4617-963-A MAIN BOARD, COMPLETE
****

* A-4617-966-A DISPLAY BOARD, COMPLETE
****

* 1-640-543-11 TRANSFORMER BOARD
****

* 1-560-242-21 BUS BAR 4P
* 4-932-810-11 CUSHION (FL)

(CAPACITOR)

Ref. No.	Part No.	Description			Remarks
C101	1-126-939-11	ELECT	10000uF	20%	16V
C102	1-124-907-11	ELECT	10uF	20%	50V
C103	1-124-477-11	ELECT	47uF	20%	25V
C104	1-135-155-21	TANTALUM CHIP	4.7uF	10%	10V
C105	1-164-346-11	CERAMIC CHIP	1uF		16V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-124-443-00	ELECT	100uF	20%	10V
C108	1-124-443-00	ELECT	100uF	20%	10V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C111	1-126-063-11	ELECT	100uF	20%	63V
C112	1-124-907-11	ELECT	10uF	20%	50V
C113	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C115	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C116	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C117	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C120	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C121	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C130	1-124-907-11	ELECT	10uF	20%	50V
C201	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-164-346-11	CERAMIC CHIP	1uF		16V
C203	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C204	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C207	1-164-346-11	CERAMIC CHIP	1uF		16V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C304	1-164-346-11	CERAMIC CHIP	1uF		16V
C306	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C307	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C308	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C310	1-164-346-11	CERAMIC CHIP	1uF		16V
C311	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C312	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C313	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C314	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C315	1-136-017-00	CERAMIC CHIP	0.0047uF		50V
C316	1-136-017-00	CERAMIC CHIP	0.0047uF		50V
C317	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C318	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C319	1-164-346-11	CERAMIC CHIP	1uF		16V
C320	1-164-346-11	CERAMIC CHIP	1uF		16V
C321	1-164-346-11	CERAMIC CHIP	1uF		16V
C322	1-164-346-11	CERAMIC CHIP	1uF		16V
C323	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C324	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C325	1-124-443-00	ELECT	100uF	20%	10V
C326	1-124-443-00	ELECT	100uF	20%	10V
C341	1-164-346-11	CERAMIC CHIP	1uF		16V
C401	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C402	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C403	1-164-346-11	CERAMIC CHIP	1uF		16V
C404	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C501	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C502	1-163-038-00	CERAMIC CHIP	0.1uF		25V

(CONNECTOR)

Ref. No.	Part No.	Description	Remarks
CN101	* 1-569-624-11	SOCKET, CONNECTOR 17P	
CN102	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P	
CN201	1-568-802-11	SOCKET, CONNECTOR 19P	
CN202	* 1-564-339-00	PIN, CONNECTOR 5P	
CN203	* 1-564-340-00	PIN, CONNECTOR 6P	
CN301	* 1-573-099-11	HOUSING, CONNECTOR 12P	
CN401	* 1-573-098-11	HOUSING, CONNECTOR 12P	
CN901	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P	

(DIODE)

Ref. No.	Part No.	Description		Remarks
D101	8-719-210-39	DIODE	EC10QS-04	
D102	8-719-210-39	DIODE	EC10QS-04	
D103	8-719-210-33	DIODE	EC10DS2	
D104	8-719-210-33	DIODE	EC10DS2	
D106	8-719-106-17	DIODE	RD6.8M-B2	
D113	8-719-210-33	DIODE	EC10DS2	
D131	8-719-800-76	DIODE	1SS226	
D132	8-719-800-76	DIODE	1SS226	
D201	8-719-400-18	DIODE	MA152WK	
D206	8-719-105-58	DIODE	RD3.9M-B2	
D302	8-719-104-34	DIODE	1S2836	
D401	8-719-106-36	DIODE	RD8.2M-B3	
D402	8-719-104-34	DIODE	1S2836	
D403	8-719-400-18	DIODE	MA152WK	

(INDICATOR)

Ref. No.	Part No.	Description	Remarks
FL401	1-519-652-11	INDICATOR TUBE, FLUORESCENT	

When indicating parts by reference number, please include the board name.

MAIN **DISPLAY** **TRANSFORMER**

(IC)

Ref. No.	Part No.	Description	Remarks
IC101	8-759-604-86	IC M5F7807L	
IC102	8-759-633-42	IC M5293L	
IC103	8-759-636-24	IC M5290FP	
IC105	8-749-921-12	IC GP1F32T	
IC201	8-759-153-16	IC uPD75116GF-760-3BE	
IC202	8-752-337-26	IC CXD2500AQ	
IC203	8-759-636-20	IC M54641FP	
IC204	8-752-337-10	IC CXD2554M	
IC301	8-759-506-63	IC PCM67U	
IC302	8-759-243-19	IC TC7SU04F	
IC303	8-759-981-95	IC RC4558PS	
IC304	8-759-981-95	IC RC4558PS	
IC401	8-759-154-14	IC uPD75206GF-716-3BE	

(CHIP JUMPER)

Ref. No.	Part No.	Description	Remarks
JW202	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW401	1-216-295-00	METAL CHIP 0 5% 1/10W	

(TRANSISTOR)

Ref. No.	Part No.	Description	Remarks
Q101	8-729-804-41	TRANSISTOR 2SB1122-S	
Q102	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q103	8-729-805-69	TRANSISTOR 2SA1341	
Q201	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q301	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q302	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q303	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q304	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q306	8-729-805-69	TRANSISTOR 2SA1341	

(RESISTOR)

Ref. No.	Part No.	Description	Remarks
R101	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R102	1-216-043-00	METAL CHIP 560 5% 1/10W	
R103	1-216-039-00	METAL CHIP 390 5% 1/10W	
R104	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R106	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R107	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R108	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R109	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R203	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R204	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R205	1-216-001-00	METAL CHIP 10 5% 1/10W	
R206	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R211	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R213	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R214	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R215	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R216	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R217	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R218	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R219	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R220	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R221	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R222	1-216-033-00	METAL CHIP 220 5% 1/10W	
R223	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R224	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R225	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R226	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R227	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R228	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R307	1-216-047-00	METAL CHIP 820 5% 1/10W	
R308	1-216-047-00	METAL CHIP 820 5% 1/10W	
R309	1-216-047-00	METAL CHIP 820 5% 1/10W	
R310	1-216-047-00	METAL CHIP 820 5% 1/10W	
R311	1-216-037-00	METAL CHIP 330 5% 1/10W	
R312	1-216-037-00	METAL CHIP 330 5% 1/10W	
R313	1-216-047-00	METAL CHIP 820 5% 1/10W	
R314	1-216-047-00	METAL CHIP 820 5% 1/10W	
R315	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R316	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R317	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R318	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R319	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R320	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R321	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R322	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R323	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R324	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R325	1-216-033-00	METAL CHIP 220 5% 1/10W	
R326	1-216-033-00	METAL CHIP 220 5% 1/10W	
R327	1-216-033-00	METAL CHIP 220 5% 1/10W	
R328	1-216-033-00	METAL CHIP 220 5% 1/10W	
R329	1-216-033-00	METAL CHIP 220 5% 1/10W	
R330	1-216-033-00	METAL CHIP 220 5% 1/10W	
R331	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R332	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R333	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R334	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R401	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R402	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R403	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R404	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R405	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R406	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R407	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R408	1-216-093-00	METAL CHIP 68K 5% 1/10W	

When indicating parts by reference number, please include the board name.

MAIN DISPLAY TRANSFORMER LOADING

Ref. No.	Part No.	Description	Remarks
R409	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R410	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R411	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R412	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R413	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R414	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R501	1-216-041-00	METAL CHIP 470 5% 1/10W	
R502	1-216-041-00	METAL CHIP 470 5% 1/10W	
R503	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R504	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R505	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R506	1-216-049-00	METAL CHIP 1K 5% 1/10W	
		(SWITCH)	
S401	1-572-184-11	SWITCH, KEYBOARD (I◁◁ ◀◀)	
S402	1-572-184-11	SWITCH, KEYBOARD (▶▶ ▷▷I)	
S403	1-572-184-11	SWITCH, KEYBOARD (▶II)	
S404	1-572-184-11	SWITCH, KEYBOARD (■)	
S405	1-572-184-11	SWITCH, KEYBOARD (OPEN/CLOSE)	
S406	1-572-184-11	SWITCH, KEYBOARD (EDIT)	
S407	1-572-184-11	SWITCH, KEYBOARD (CHECK)	
		(TRANSFORMER)	
T101	⚠ 1-450-704-11	TRANSFORMER, POWER	
		(VIBRATOR)	
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X301	1-567-908-11	VIBRATOR, CRYSTAL (16.9MHz)	
X401	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

****

* 1-634-461-11 LOADING BOARD
****

Ref. No.	Part No.	Description	Remarks
		(CONNECTOR)	
CN291	* 1-564-498-11	PIN, CONNECTOR 5P	
		(SWITCH)	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	Remarks
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
14	1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
105	⚠ 8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102	X-4917-504-1	ASSY, MOTOR (SLED)	
M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)	

****

ACCESSORIES & PACKING MATERIALS
****

Ref. No.	Part No.	Description	Remarks
	4-920-941-01	SHEET (B), PROTECTION	
	* 4-945-079-01	CUSHION	
	* 4-941-548-01	LABEL, CLASS 1	

****

HARDWARE LIST

Ref. No.	Part No.	Description	Remarks
# 1	7-682-547-09	SCREW +BVTT 3X6 (S)	
# 2	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
# 4	7-682-548-04	SCREW +BVTT 3X8 (S)	
# 5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
# 6	7-621-775-10	SCREW +B 2.6X4	
# 7	7-624-105-04	STOP RING 2.3, TYPE -E	
# 8	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT	
# 9	7-621-255-15	SCREW +P 2X3	
#10	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Sony Corporation
Audio Group

English
91G1961-1
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Published by Customer Relations and Service Group

CDP-H3600

SONY®
SERVICE MANUAL

AEP Model
UK Model

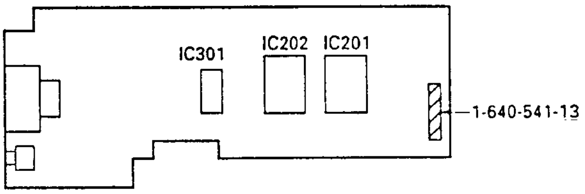
SUPPLEMENT-2

File this Supplement with the Service Manual.

Subject : The main board of C type has been change.

Note for discrimination :

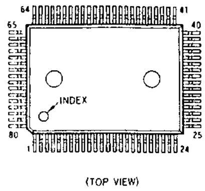
You can discriminate either type according to the silk printing and mounted parts on the main board.



SECTION 1
DIAGRAMS

1-1. SEMICONDUCTOR LEAD LAYOUTS

CXD2500BQ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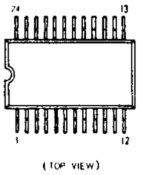
41
65
40
INDEX
80
25
1
24
(TOP VIEW)

CXD2554M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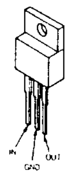
13
1
12
(TOP VIEW)

M5F78M07L



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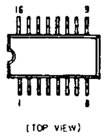
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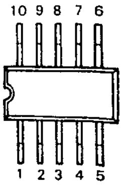
(TOP VIEW)

M54641FP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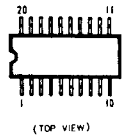
1 2 3 4 5

PCM67U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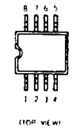
1
10
(TOP VIEW)

RC4558PS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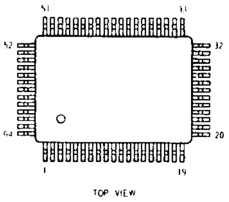
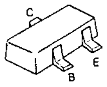
1 2 3 4
(TOP VIEW)

µPD75116GF-F21-3BE


51
33
52
32
64
20
1
19
TOP VIEW

DTA144EK
2SA1162-G
2SC1623-L5L6



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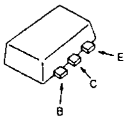
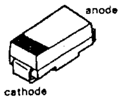
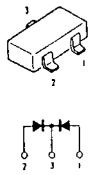


EC10DS2
EC10QS-04


anode
cathode

MA152WK



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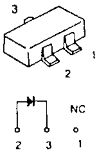

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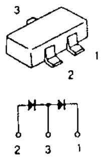

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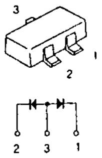


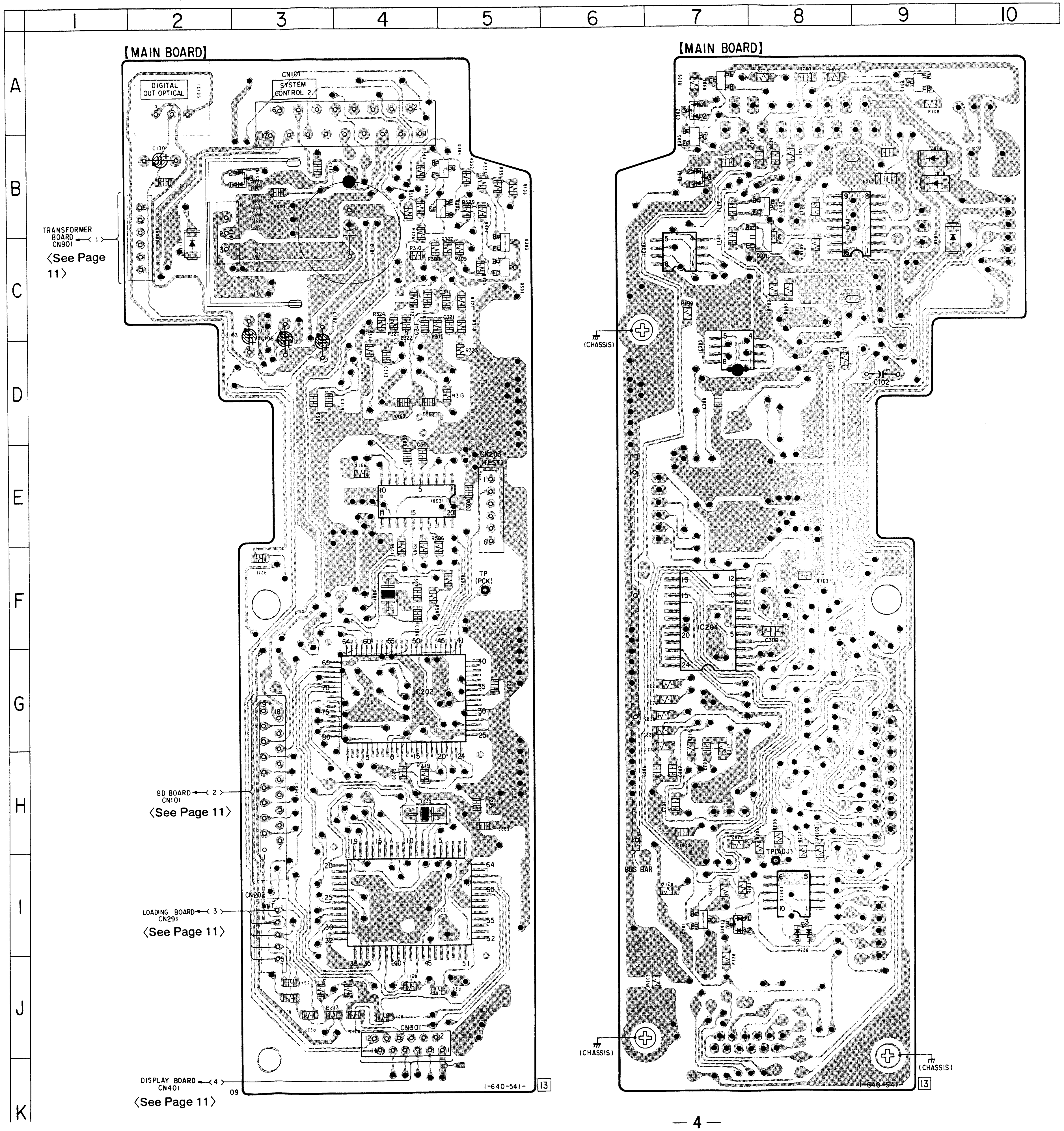
1-2. PRINTED WIRING BOARD

- See page 2 for Semiconductor Lead Layouts.

< > : The pages above correspond to CDP-H3600 SUPPLEMENT-1.

• SEMICONDUCTOR LOCATION

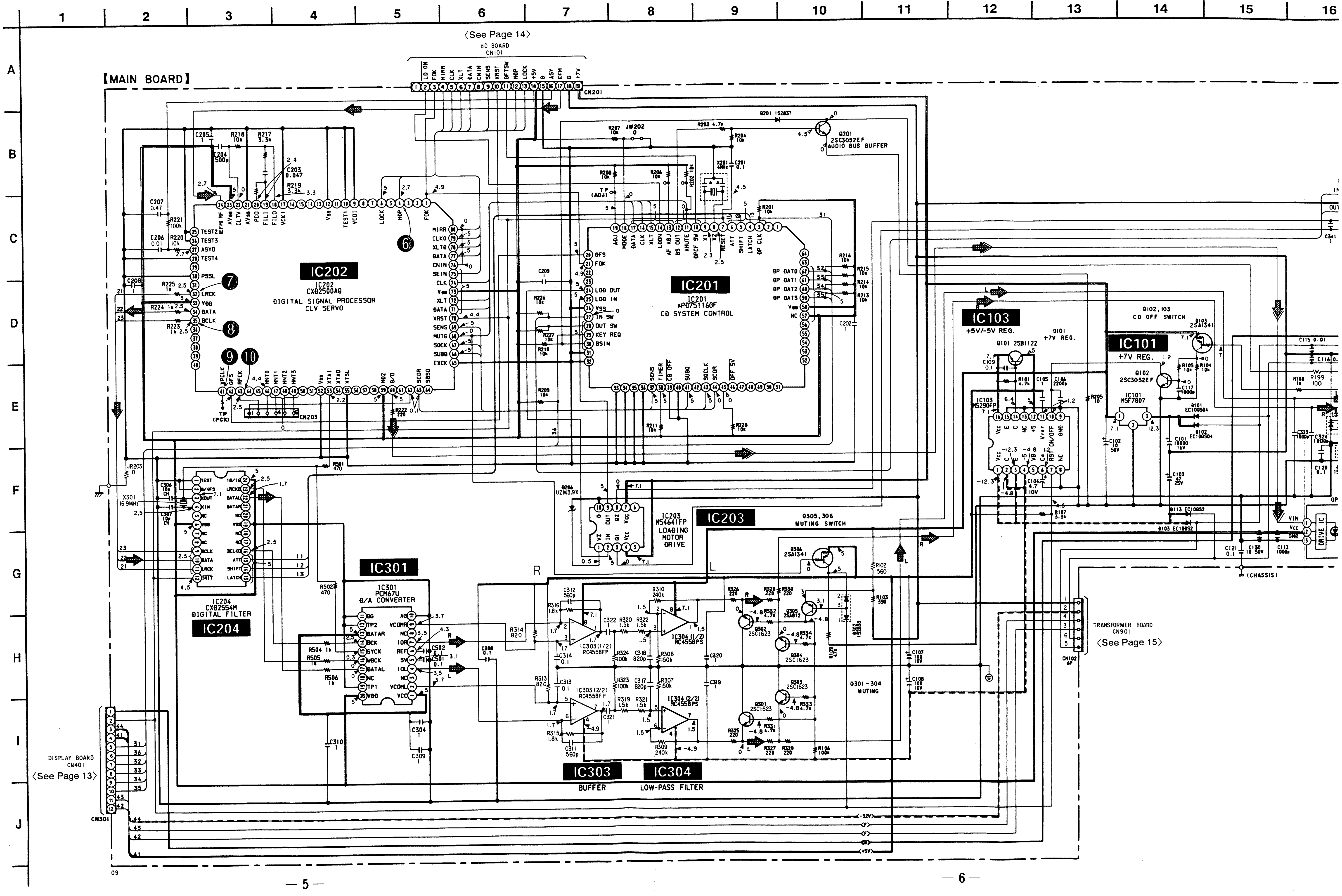
Ref. No.	Location
D101	B-9
D102	B-9
D103	C-9
D113	C-2
D131	B-7
D132	B-3
D201	I-7
D206	J-8
D302	A-7
IC101	B-2
IC103	B-8
IC105	A-2
IC201	I-4
IC202	G-4
IC203	I-8
IC204	F-7
IC301	E-4
IC303	D-7
IC304	C-6
Q101	C-8
Q102	B-8
Q103	A-9
Q201	I-7
Q301	C-5
Q302	B-5
Q303	C-5
Q304	B-5
Q305	B-7
Q306	A-7


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
[MAIN BOARD]
DIGITAL OUT OPTICAL
CN101
SYSTEM CONTROL 2
TRANSFORMER BOARD CN901 ◄—< 1 >
<See Page 11>
CN203 (TEST)
TP (PCK)
IC202
BD BOARD CN101 ◄—< 2 >
<See Page 11>
CN202
WHT
LOADING BOARD CN291 ◄—< 3 >
<See Page 11>
CN301
DISPLAY BOARD CN401 ◄—< 4 >
<See Page 11>
1-640-541-
13
[MAIN BOARD]
(CHASSIS)
C102
IC204
C309
BUS BAR
TP(ADJ)
(CHASSIS)
(CHASSIS)
1-640-541-
13

Note :

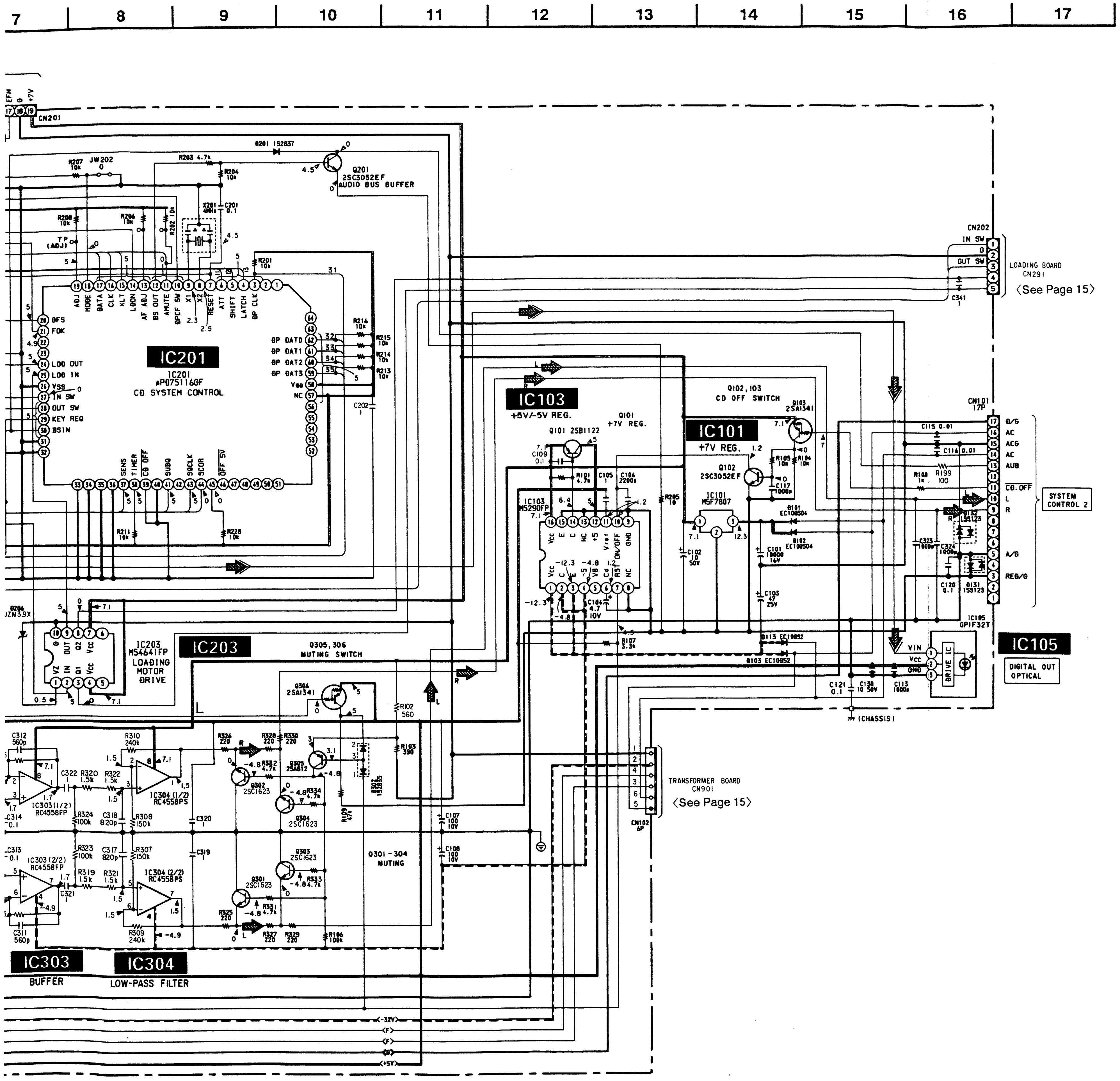
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern from the side which enable seeing. (The other layr's patterns are not indicated.)

1-3. SCHEMATIC DIAGRAM • See page 8 for IC Block Diagrams. < > : The pages above correspond to CDP-H3600 SUPPLEMENT-1.

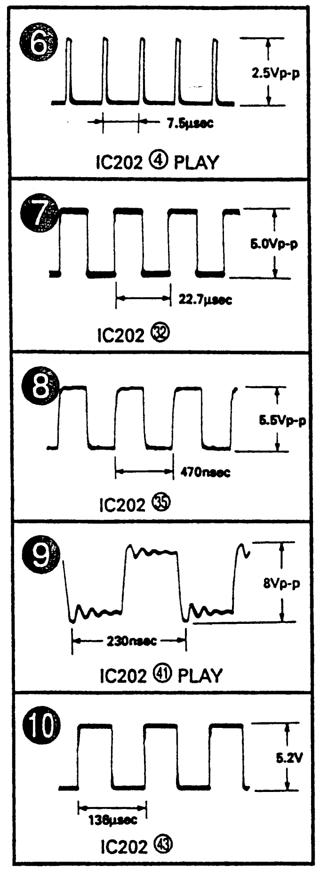


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
〈See Page 14〉
BD BOARD
CN101
LD ON FOK MIRR CLK XLT DATA CNIN SENS XRST DFTSW MDP LOCK +5V G ASY EFM G +7V
CN201
【MAIN BOARD】
IC202
IC202
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
IC201
IC201
μPD75116GF
CD SYSTEM CONTROL
IC103
+5V/-5V REG.
IC103
M5290FP
IC101
+7V REG.
IC101
M5F7807
Q101 2SB1122
Q101
+7V REG.
Q102,103
CD OFF SWITCH
Q103
2SA1341
Q102
2SC3052EF
Q201
2SC3052EF
AUDIO BUS BUFFER
IC203
IC203
M54641FP
LOADING
MOTOR
DRIVE
IC204
IC204
CXD2554M
DIGITAL FILTER
IC301
IC301
PCM67U
D/A CONVERTER
IC303
BUFFER
IC304
LOW-PASS FILTER
IC303(1/2)
RC4558FP
IC303(2/2)
RC4558FP
IC304(1/2)
RC4558PS
IC304(2/2)
RC4558PS
Q305,306
MUTING SWITCH
Q306
2SA1341
Q305
2SA812
Q301-304
MUTING
Q301
2SC1623
Q302
2SC1623
Q303
2SC1623
Q304
2SC1623
X301
16.9MHz
X201
4MHz
CN203
TP
(PCK)
TP
(ADJ)
D204
UZM3.9X
D201 1S2837
TRANSFORMER BOARD
CN901
〈See Page 15〉
CN102
6P
DISPLAY BOARD
CN401
〈See Page 13〉
CN301
BRIVE IC
VIN
Vcc
GND
(CHASSIS)
<-32V>
<F>
<F>
<+5V>
R
L

correspond to CDP-H3600 SUPPLEMENT-1.


7
8
9
10
11
12
13
14
15
16
17
CN201
Q201 2SC3052EF AUDIO BUS BUFFER
IC201
IC201 µPD75116GF
CD SYSTEM CONTROL
IC203
IC203 M54641FP LOADING MOTOR DRIVE
Q305, 306 MUTING SWITCH
IC103
+5V/-5V REG.
Q101 +7V REG.
Q101 2SB1122
IC103 M5290FP
IC101
+7V REG.
Q102 2SC3052EF
IC101 M5F7807
Q102, 103 CD OFF SWITCH
Q103 2SA1341
CN202
IN SW
OUT SW
LOADING BOARD CN291
⟨See Page 15⟩
CN101 17P
B/G
AC
ACG
AC
AUB
CD.OFF
L
R
A/G
REG/G
SYSTEM CONTROL 2
IC105 GP1F32T
IC105
DIGITAL OUT OPTICAL
DRIVE IC
VIN
Vcc
GND
(CHASSIS)
TRANSFORMER BOARD CN901
⟨See Page 15⟩
CN102 6P
Q301 - 304 MUTING
IC303
BUFFER
IC304
LOW-PASS FILTER
IC303 (1/2) RC4558FP
IC303 (2/2) RC4558FP
IC304 (1/2) RC4558PS
IC304 (2/2) RC4558PS
(-32V)
(F)
(F)
(G)
(+5V)

• Waveforms

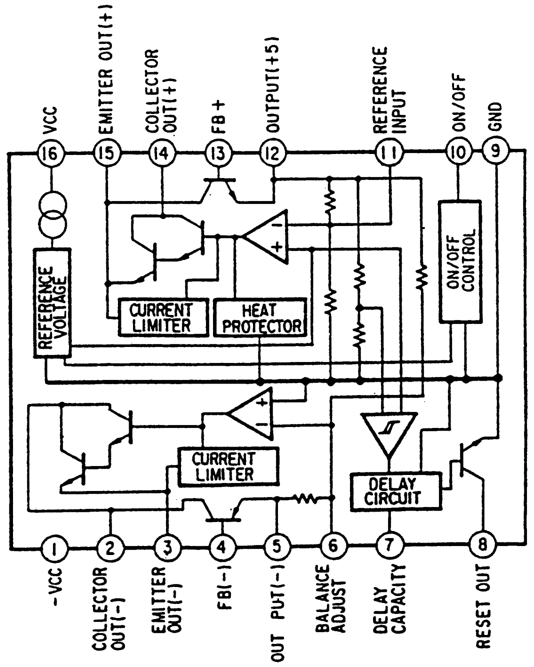


Note:

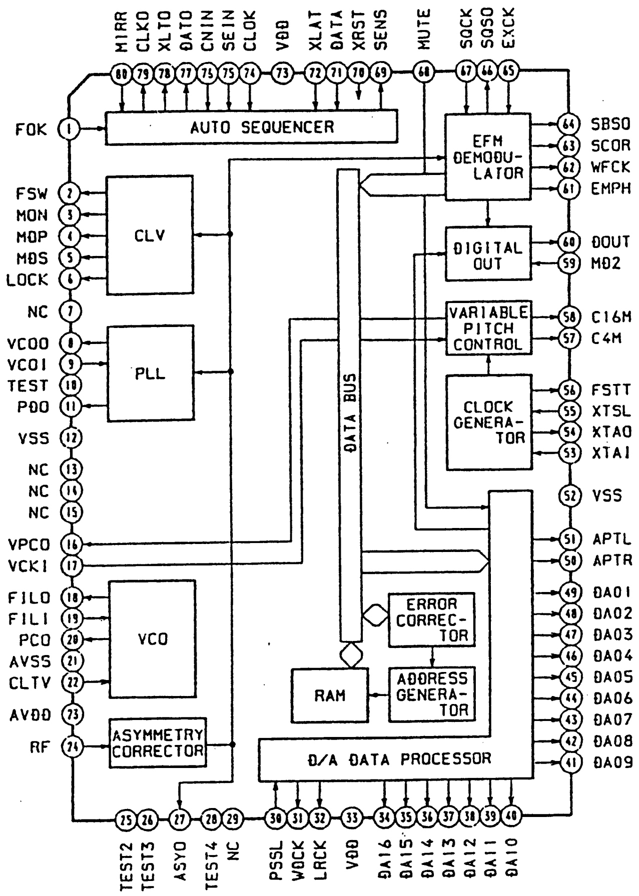
- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- ▬ : B+ Line
- ╍ : B– Line
- Voltages and waveforms are dc with respect to ground in play mode.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : CD
  - ⇛ : digital out

1-4. IC BLOCK DIAGRAMS

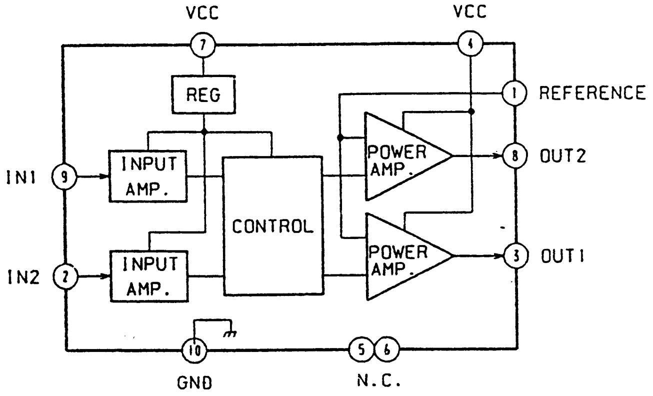
IC103 M5290FP


VCC
EMITTER OUT(+)
COLLECTOR OUT(+)
FB+
OUTPUT(+5)
REFERENCE INPUT
ON/OFF
GND
REFERENCE VOLTAGE
CURRENT LIMITER
HEAT PROTECTOR
ON/OFF CONTROL
CURRENT LIMITER
DELAY CIRCUIT
-VCC
COLLECTOR OUT(-)
EMITTER OUT(-)
FB(-)
OUT PUT(-)
BALANCE ADJUST
DELAY CAPACITY
RESET OUT
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

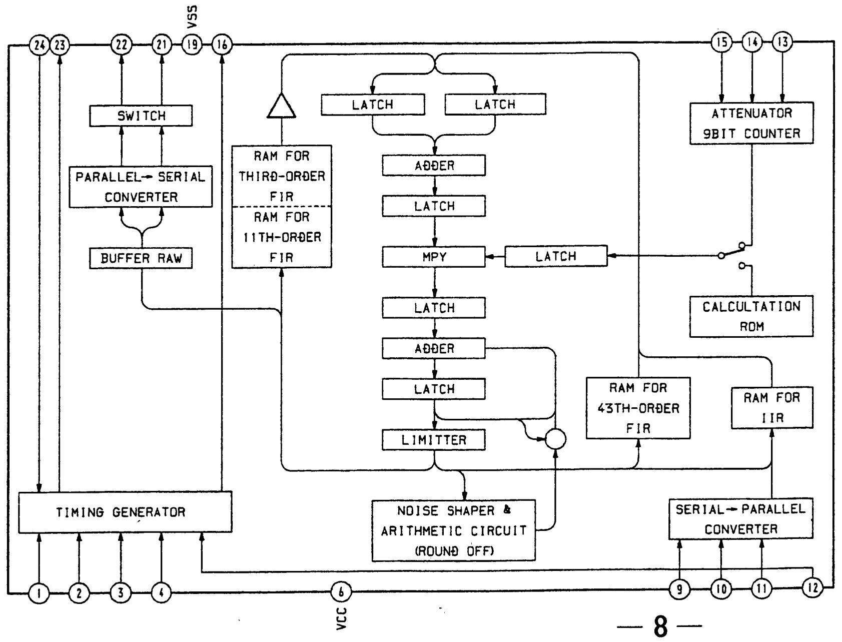
IC202 CXD2500AQ


MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
FOK
FSW
MON
MDP
MDS
LOCK
NC
VCOO
VCOI
TEST
PDO
VSS
NC
NC
NC
VPCO
VCKI
FILO
FILI
PCO
AVSS
CLTV
AVDD
RF
AUTO SEQUENCER
CLV
PLL
VCO
ASYMMETRY CORRECTOR
DATA BUS
EFM DEMODU-LATOR
DIGITAL OUT
VARIABLE PITCH CONTROL
CLOCK GENERA-TOR
ERROR CORREC-TOR
RAM
ADDRESS GENERA-TOR
D/A DATA PROCESSOR
SBSO
SCOR
WFCK
EMPH
DOUT
MD2
C16M
C4M
FSTT
XTSL
XTAO
XTAI
VSS
APTL
APTR
DA01
DA02
DA03
DA04
DA05
DA06
DA07
DA08
DA09
TEST2
TEST3
ASYO
TEST4
NC
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10

IC203 M54641FP


VCC
VCC
7
4
REG
1
REFERENCE
INPUT AMP.
POWER AMP.
8
OUT2
IN1
9
CONTROL
POWER AMP.
3
OUT1
IN2
2
INPUT AMP.
10
5
6
GND
N.C.

IC204 CXD2554M


VSS
24
23
22
21
19
16
15
14
13
SWITCH
PARALLEL→SERIAL CONVERTER
BUFFER RAW
RAM FOR THIRD-ORDER FIR
RAM FOR 11TH-ORDER FIR
LATCH
LATCH
ADDER
LATCH
MPY
LATCH
LATCH
ADDER
LATCH
LIMITTER
ATTENUATOR 9BIT COUNTER
CALCULTATION ROM
RAM FOR 43TH-ORDER FIR
RAM FOR IIR
TIMING GENERATOR
NOISE SHAPER & ARITHMETIC CIRCUIT (ROUND OFF)
SERIAL→PARALLEL CONVERTER
1
2
3
4
6
VCC
9
10
11
12

SECTION 2
ELECTRICAL PARTS LIST

MAIN

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remark
*	A-4649-037-A	MAIN BOARD, COMPLETE			
		********************			
*	1-560-242-21	BUS BAR 4P			
*	4-880-403-11	HEAT SINK			
	7-682-548-04	SCREW +BVTT 3×8 (S)			
		< CAPACITOR >			
C101	1-126-939-11	ELECT	10000uF	20%	16V
C102	1-124-907-11	ELECT	10uF	20%	50V
C103	1-124-477-11	ELECT	47uF	20%	25V
C104	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C105	1-164-346-11	CERAMIC CHIP	1uF		16V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-124-443-00	ELECT	100uF	20%	10V
C108	1-124-443-00	ELECT	100uF	20%	10V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C115	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C116	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C117	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C120	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C121	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C130	1-124-907-11	ELECT	10uF	20%	50V
C201	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-164-346-11	CERAMIC CHIP	1uF		16V
C203	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C204	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C207	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C304	1-164-346-11	CERAMIC CHIP	1uF		16V
C306	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C307	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C308	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C309	1-162-638-11	CERAMIC CHIP	1uF		16V
C310	1-164-346-11	CERAMIC CHIP	1uF		16V
C311	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C312	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C313	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C314	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C317	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C318	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C319	1-164-346-11	CERAMIC CHIP	1uF		16V
C320	1-164-346-11	CERAMIC CHIP	1uF		16V
C321	1-164-346-11	CERAMIC CHIP	1uF		16V
C322	1-164-346-11	CERAMIC CHIP	1uF		16V
C323	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C324	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C341	1-164-346-11	CERAMIC CHIP	1uF		16V
C501	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C502	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
* CN101	1-569-624-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)			
CN102	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P			
CN201	1-568-802-11	SOCKET, CONNECTOR 19P			
* CN202	1-564-339-00	PIN, CONNECTOR 5P			
* CN203	1-564-340-00	PIN, CONNECTOR 6P			
* CN301	1-573-099-11	HOUSING, CONNECTOR 12P			
		< DIODE >			
D101	8-719-210-39	DIODE	EC10QS-04		
D102	8-719-210-39	DIODE	EC10QS-04		
D103	8-719-210-33	DIODE	EC10DS2		
D113	8-719-210-33	DIODE	EC10DS2		
D131	8-719-800-76	DIODE	1SS226		
D132	8-719-800-76	DIODE	1SS226		
D201	8-719-400-18	DIODE	MA152WK		
D206	8-719-021-11	DIODE	UZM3.9X		
D302	8-719-104-34	DIODE	1S2836		
		< IC >			
IC101	8-759-605-00	IC	M5F78M07L		
IC103	8-759-636-24	IC	M5290FP		
IC105	8-749-921-12	IC	GP1F32T (DIGITAL OUT OPTICAL)		
IC201	8-759-059-86	IC	UPD75116GF-F21-3BE		
IC202	8-752-352-93	IC	CXD2500BQ		
IC203	8-759-636-20	IC	M54641FP		
IC204	8-752-337-10	IC	CXD2554M		
IC301	8-759-506-63	IC	PCM67U		
IC303	8-759-996-43	IC	RC4558PS		
IC304	8-759-996-43	IC	RC4558PS		

MAIN

Ref. No.	Part No.	Description	Remark
		< JUMPER RESISTOR >	
JW202	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR203	1-216-295-00	METAL CHIP 0 5% 1/10W	
		< TRANSISTOR >	
Q101	8-729-804-41	TRANSISTOR 2SB1122-S	
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q103	8-729-901-06	TRANSISTOR DTA144EK	
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q304	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q306	8-729-901-06	TRANSISTOR DTA144EK	
		< RESISTOR >	
R101	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R102	1-216-043-00	METAL CHIP 560 5% 1/10W	
R103	1-216-039-00	METAL CHIP 390 5% 1/10W	
R104	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R106	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R107	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R108	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R109	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R199	1-216-025-00	METAL CHIP 100 5% 1/10W	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R203	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R204	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R205	1-216-001-00	METAL CHIP 10 5% 1/10W	
R206	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R211	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R213	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R214	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R215	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R216	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R217	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R218	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R219	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R220	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R221	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R222	1-216-033-00	METAL CHIP 220 5% 1/10W	
R223	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R224	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R225	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R226	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R227	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R228	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R307	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R308	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R309	1-216-106-00	METAL CHIP 240K 5% 1/10W	
R310	1-216-106-00	METAL CHIP 240K 5% 1/10W	
R313	1-216-047-00	METAL CHIP 820 5% 1/10W	
R314	1-216-047-00	METAL CHIP 820 5% 1/10W	
R315	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R316	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R319	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R320	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R321	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R322	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R323	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R324	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R325	1-216-033-00	METAL CHIP 220 5% 1/10W	
R326	1-216-033-00	METAL CHIP 220 5% 1/10W	
R327	1-216-033-00	METAL CHIP 220 5% 1/10W	
R328	1-216-033-00	METAL CHIP 220 5% 1/10W	
R329	1-216-033-00	METAL CHIP 220 5% 1/10W	
R330	1-216-033-00	METAL CHIP 220 5% 1/10W	
R331	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R332	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R333	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R334	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R501	1-216-041-00	METAL CHIP 470 5% 1/10W	
R502	1-216-041-00	METAL CHIP 470 5% 1/10W	
R504	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R505	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R506	1-216-049-00	METAL CHIP 1K 5% 1/10W	
		< VIBRATOR >	
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X301	1-567-908-11	VIBRATOR, CRYSTAL (16.9MHz)	

TA-H2600

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

This set is the Amplifier section in MHC-2600 and FH-E737CD.

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 6 ohm loads both channels driven, from 70 - 20000 Hz; rated 30 watts per channel minimum RMS power, with no more than 1% total harmonic distortion from 250 milliwatts to rated output.

Continuous RMS power output	30 + 30 watts (6 ohms at 1 kHz, DIN) 35 + 35 watts (6 ohms at 1 kHz, 5% THD)
Music power output	55 + 55 watts (6 ohms at 1 kHz, 10% THD)
Peak music power output **(E, Saudi Arabia model)**	330 watts
Inputs	MIX MIC (minijack): sensitivity 1 mV, impedance 600 ohms ADAPTOR (pin jacks) **(E, Saudi Arabia model)** sensitivity 300 mV, impedance 47 kilohms
Outputs	HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more. ADAPTOR (pin jacks) **(E, Saudi Arabia model)** output level 300 mV impedance 10 kilohms

Design and specifications subject to change without notice.

MICROFILM

STEREO AMPLIFIER

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig.A)

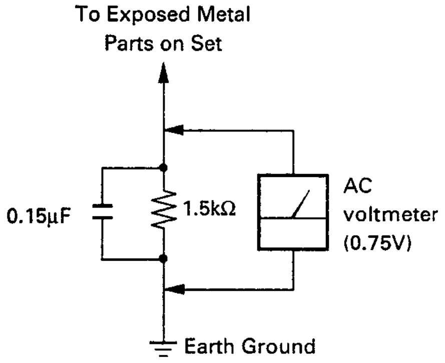


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÉCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER SES COMPOSANTS QUE PAR DES PIÉCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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- Panel, Power section - 16
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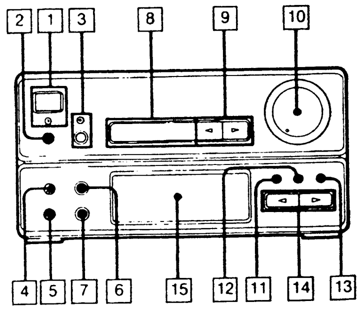
SECTION 1
GENERAL

LOCATION OF CONTROLS

This section is extracted from instruction manual.

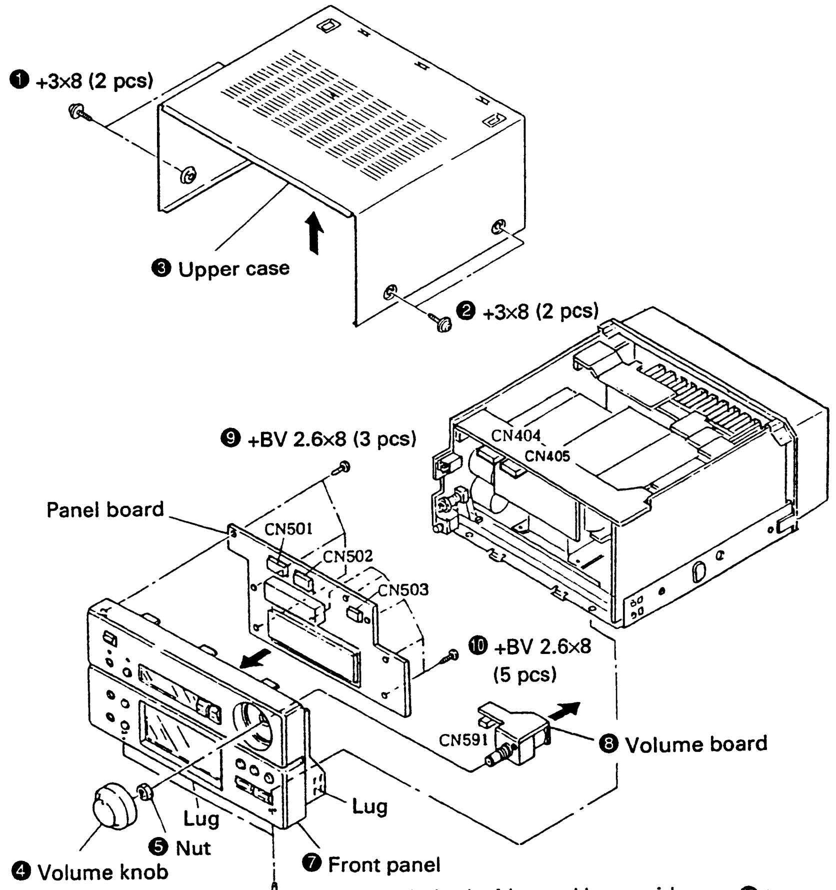
1 SYSTEM POWER switch and STANDBY indicator
The indicator remains lit as long as the AC power cord is connected to a wall outlet.
2 HEADPHONES jack (stereo minijack)
3 WAKE UP button and indicator
4 MIC (microphone) LEVEL control
5 MIX MIC (microphone) input jack
6 DISPLAY button
7 DIRECT button
8 Function indication display
9 FUNCTION <> buttons
10 VOLUME control
11 EQ (equalizer) button and indicator
12 S-SUR (simulated surround) button and indicator
13 DBFB (Dynamic Bass Feedback) button and indicator
14 PRESET ◁▷ buttons
15 Display window


2
1
3
8
9
10
4
5
7
6
15
12
11
14
13

SECTION 2
DISASSEMBLY

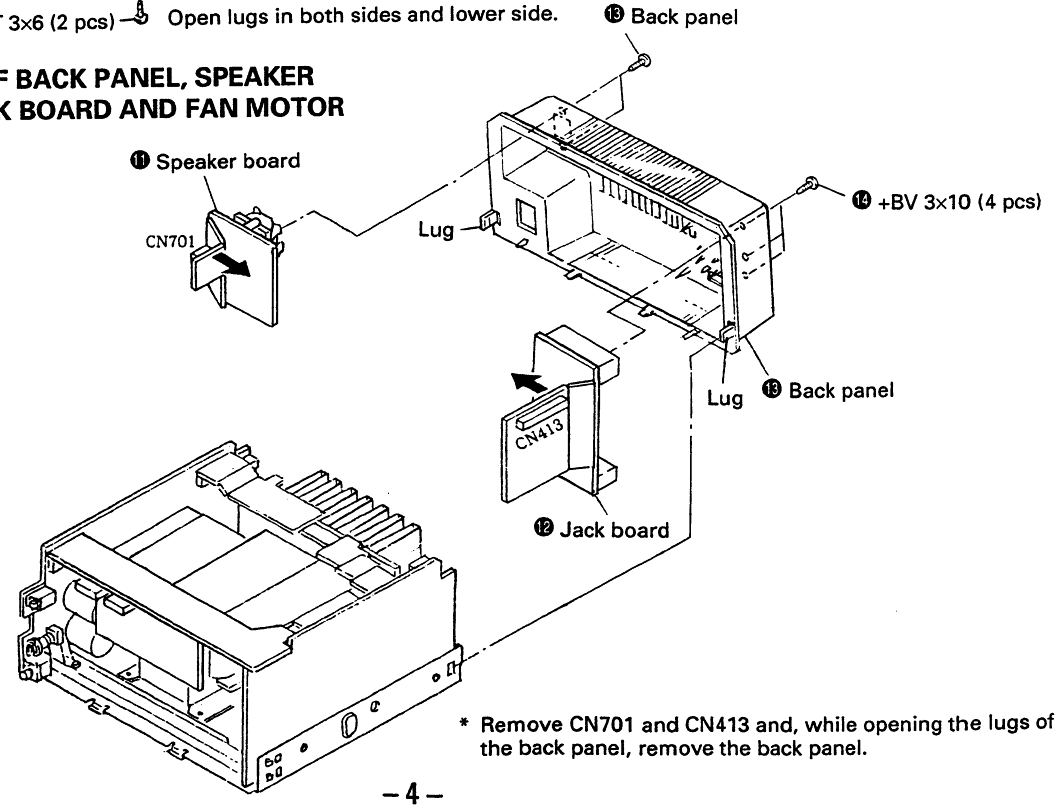
- **Remove the following parts with the numbers in that order of the numbers.**

2-1. REMOVAL OF UPPER CASE, FRONT PANEL AND PANEL BOARD


❶ +3×8 (2 pcs)
❸ Upper case
❷ +3×8 (2 pcs)
❾ +BV 2.6×8 (3 pcs)
CN404
CN405
Panel board
CN501
CN502
CN503
❿ +BV 2.6×8 (5 pcs)
CN591
❽ Volume board
Lug
Lug
❺ Nut
❹ Volume knob
❼ Front panel
❻ +BVTT 3×6 (2 pcs)

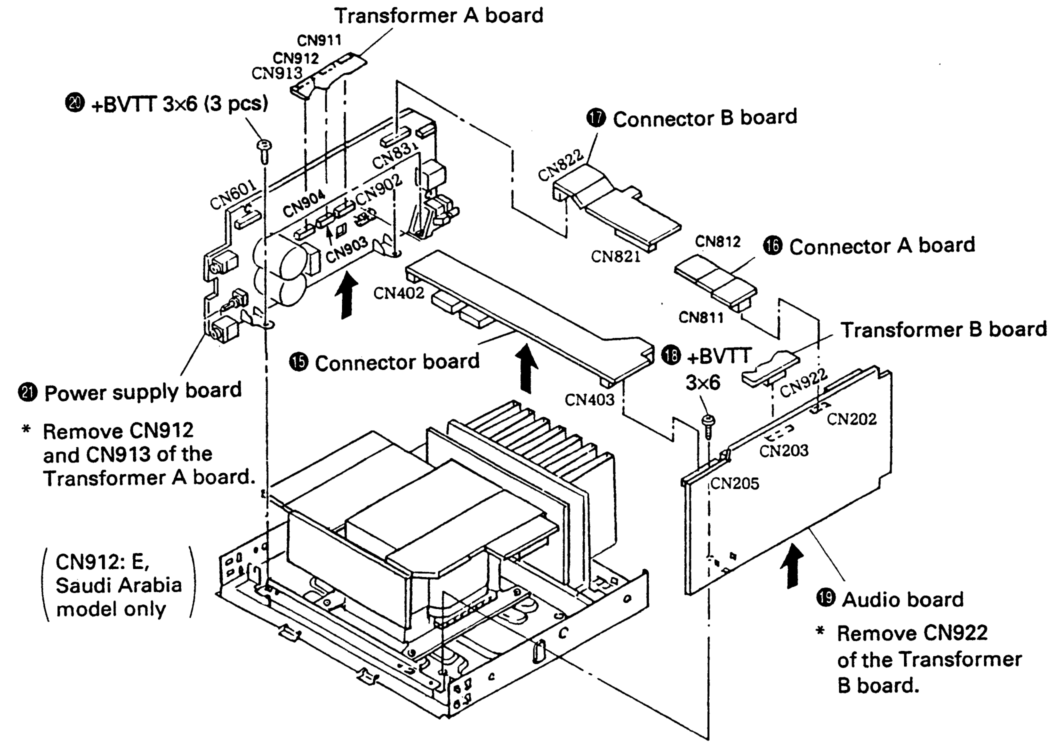
Open lugs in both sides and lower side.

2-2. REMOVAL OF BACK PANEL, SPEAKER BOARD, JACK BOARD AND FAN MOTOR


⓭ Back panel
⓫ Speaker board
CN701
Lug
⓮ +BV 3×10 (4 pcs)
CN413
Lug
⓭ Back panel
⓬ Jack board

* Remove CN701 and CN413 and, while opening the lugs of the back panel, remove the back panel.

2-3. REMOVAL OF AUDIO BOARD, POWER SUPPLY BOARD, CONNECTOR BOARD AND TRANSFORMER BOARD

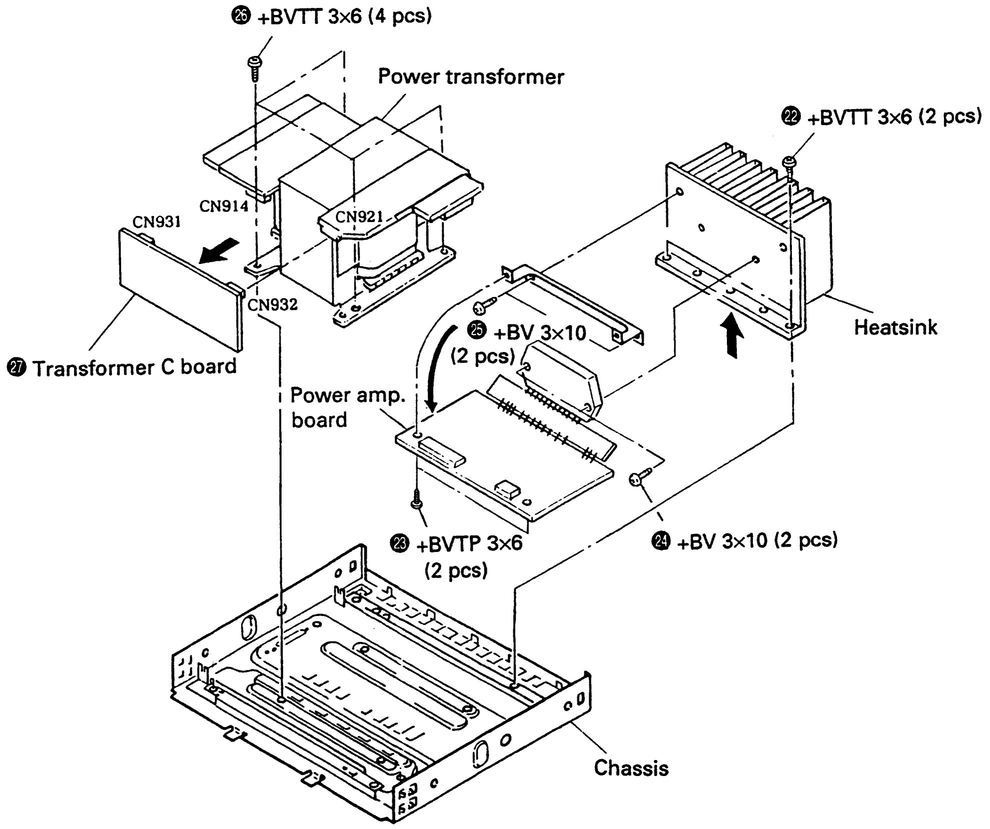

Transformer A board
CN911
CN912
CN913
⑳ +BVTT 3×6 (3 pcs)
⑰ Connector B board
CN601
CN904
CN902
CN831
CN903
CN822
CN821
CN812
⑯ Connector A board
CN402
CN811
Transformer B board
⑮ Connector board
⑱ +BVTT 3×6
CN403
CN922
CN202
CN203
CN205
㉑ Power supply board
⑲ Audio board

* Remove CN912 and CN913 of the Transformer A board.

(CN912: E, Saudi Arabia model only)

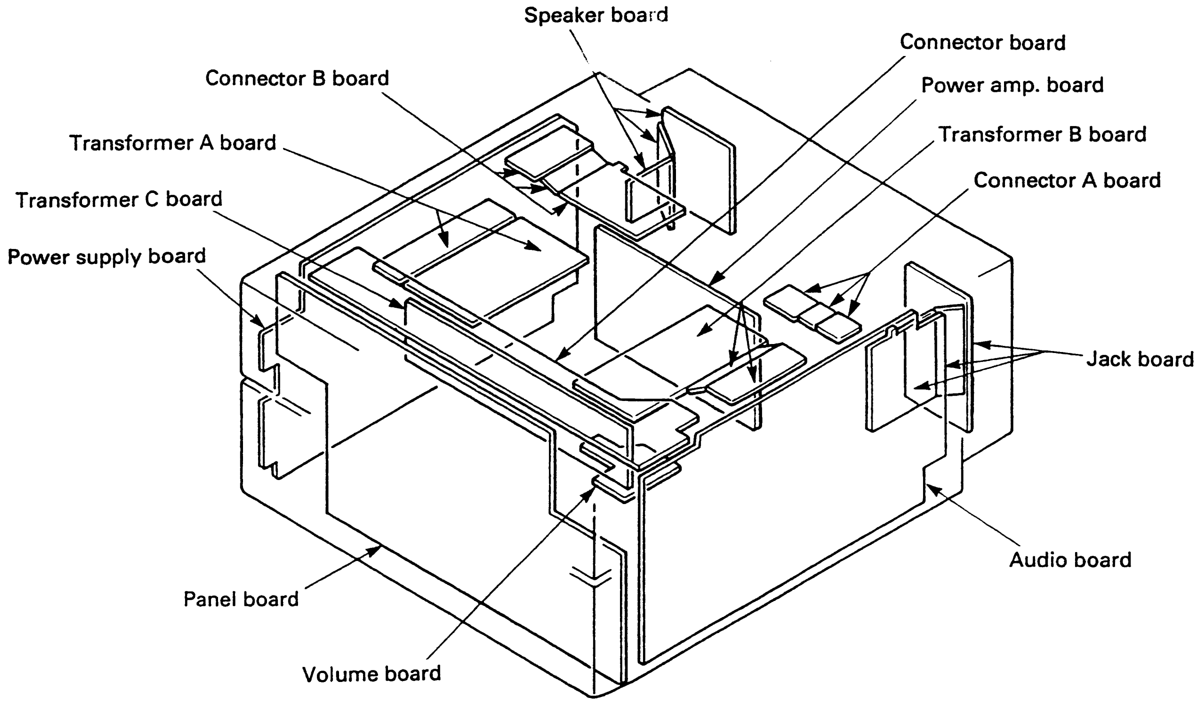
* Remove CN922 of the Transformer B board.

2-4. REMOVAL OF POWER TRANSFORMER, POWER AMP. BOARD, TRANSFORMER C BOARD AND HEATSINK


㉖ +BVTT 3×6 (4 pcs)
Power transformer
㉒ +BVTT 3×6 (2 pcs)
CN914
CN931
CN921
CN932
㉗ Transformer C board
㉕ +BV 3×10 (2 pcs)
Heatsink
Power amp. board
㉓ +BVTP 3×6 (2 pcs)
㉔ +BV 3×10 (2 pcs)
Chassis

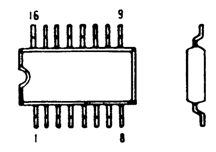
SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

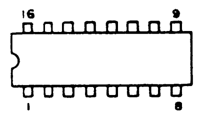

Speaker board
Connector board
Connector B board
Power amp. board
Transformer B board
Transformer A board
Connector A board
Transformer C board
Power supply board
Jack board
Audio board
Panel board
Volume board

3-2. SEMICONDUCTOR LEAD LAYOUTS

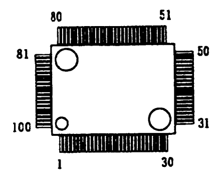
CD4052BCM
HD14053BFP



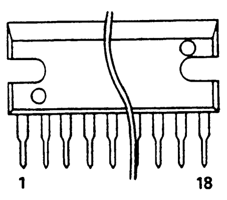
XR1091DCP



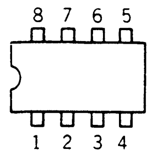
CXA1492Q


80
51
81
50
100
31
1
30

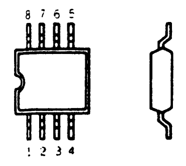
LA5603



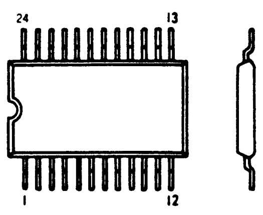
LB1639
X24C01P



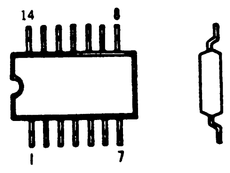
M5218AFP



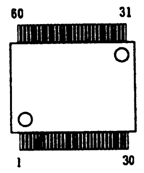
M66311FP



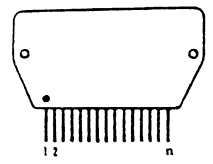
SN74HC04ANS



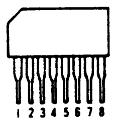
SN755703



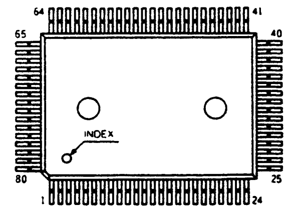
STK4142MK2
STK4152MK2



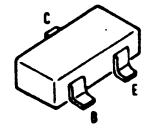
µPC1237HA



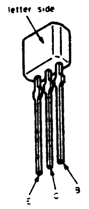
µPD78134-D29-3B9


64
41
65
40
INDEX
80
25
1
24

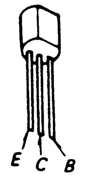
2SA1162-G
2SA1342
2SC3052-EF
2SC3396
2SC3624-L18



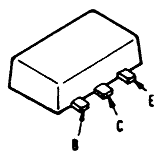
2SA1175-HFE


letter side
E
C
B

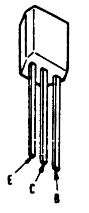
2SC1841-PAFAEA



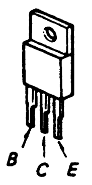
2SB1121-ST
2SD1622-S



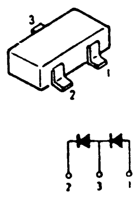
2SC2603-EF



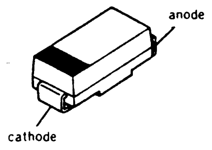
2SD2012



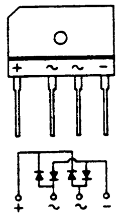
DCA010



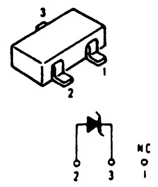
EC10DS2


anode
cathode

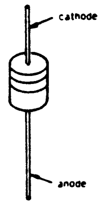
RBA-402



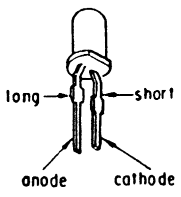
RD13M-B1
RD5.1M-B2
RD30M-B
RD36M-B



1SS120


cathode
anode

SEL2210S-CD


long
short
anode
cathode

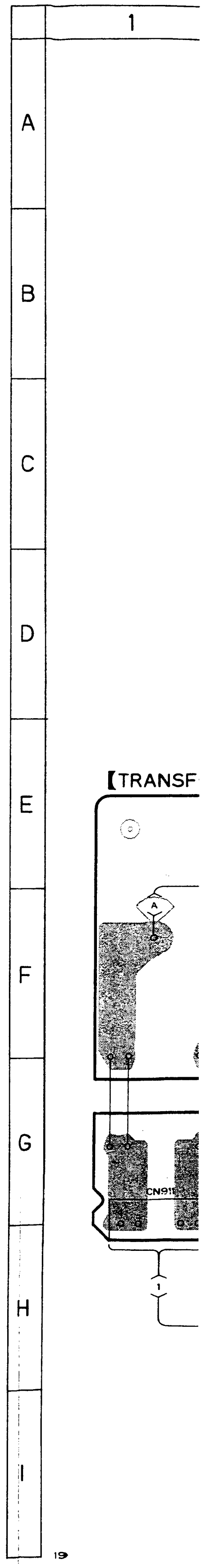
● SEMICONDUCTOR LOCATION

- MAIN BOARD

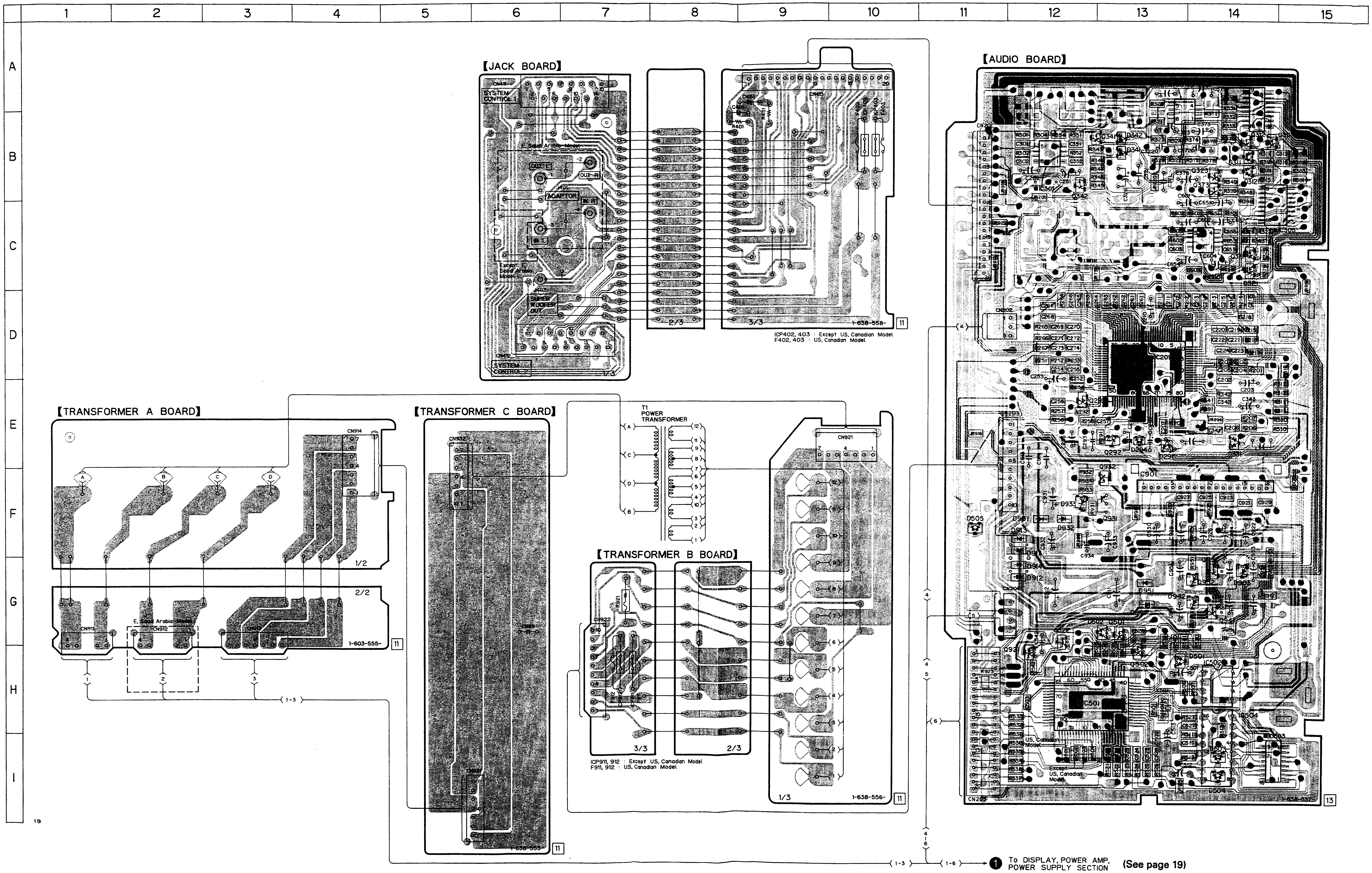
Ref. No	Location	Ref. No	Location
D291	E-13	Q312	B-14
D294	E-13	Q321	C-14
D311	B-14	Q322	G-12
D312	B-14	Q323	B-14
D331	E-14	Q341	B-13
D341	B-13	Q342	B-12
D342	B-13	Q371	C-14
D501	H-14	Q373	B-14
D502	G-13	Q501	G-13
D503	I-14	Q502	H-13
D504	I-14	Q921	H-12
D505	F-11	Q931	F-13
D911	F-12	Q932	F-13
D912	G-12	Q941	G-14
D913	F-12	Q951	G-14
D914	G-12		
D931	F-12		
D932	F-12		
D933	F-12		
D941	G-13		
D942	G-13		
D951	G-13		
D952	G-14		
D953	G-14		
IC201	D-13		
IC301	B-12		
IC303	A-13		
IC304	A-14		
IC305	C-15		
IC501	H-12		
IC502	I-14		
IC503	H-14		
IC601	C-14		
IC901	F-13		
Q292	E-13		
Q293	E-12		
Q311	B-15		

Note:
- ○——: indicated a lead wire mounted on the component si
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

3-3. PRINTED W


1
A
B
C
D
E
F
G
H
I
[TRANSF
CN91
19

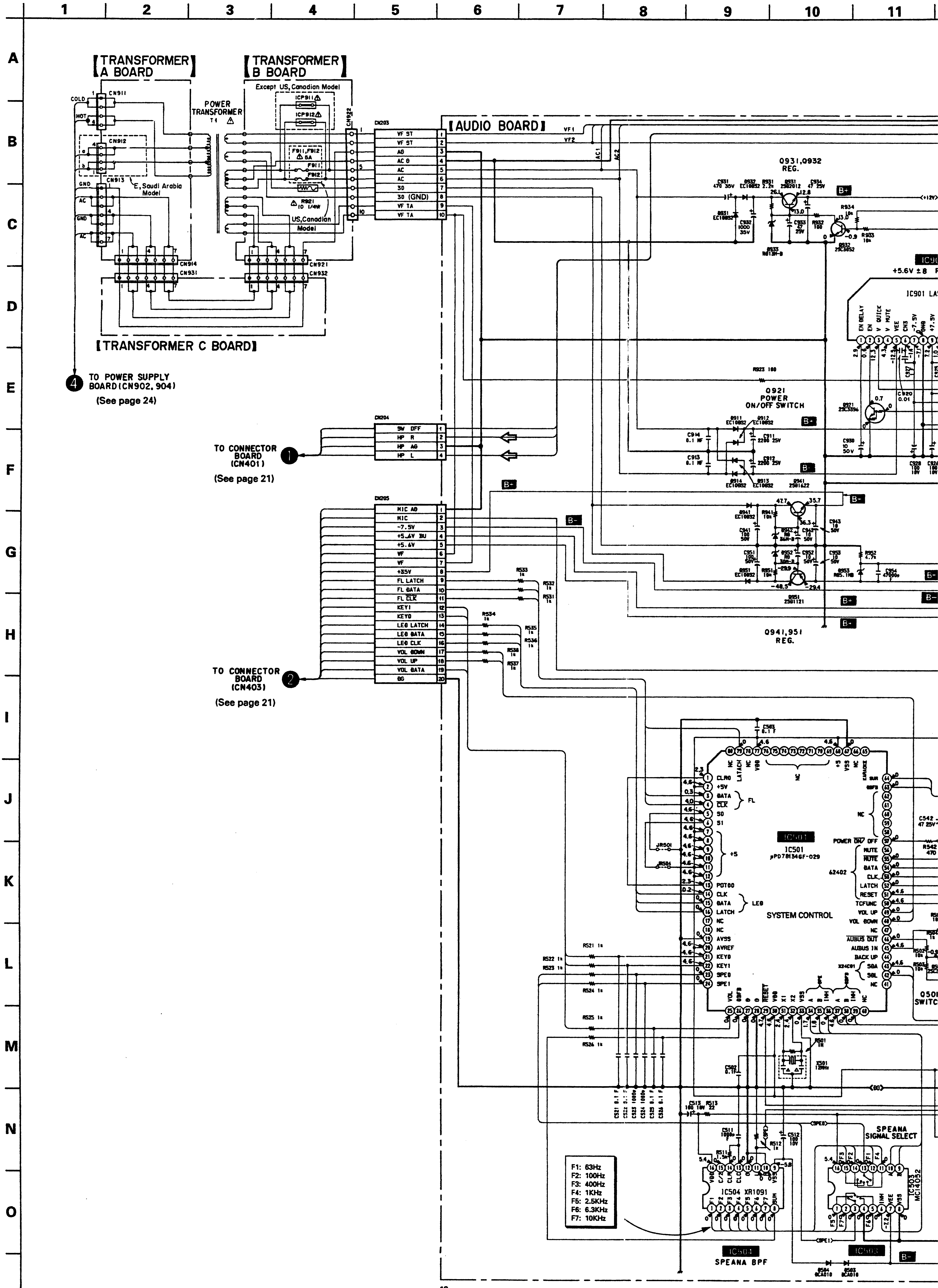
3-3. PRINTED WIRING BOARDS - MAIN SECTION -

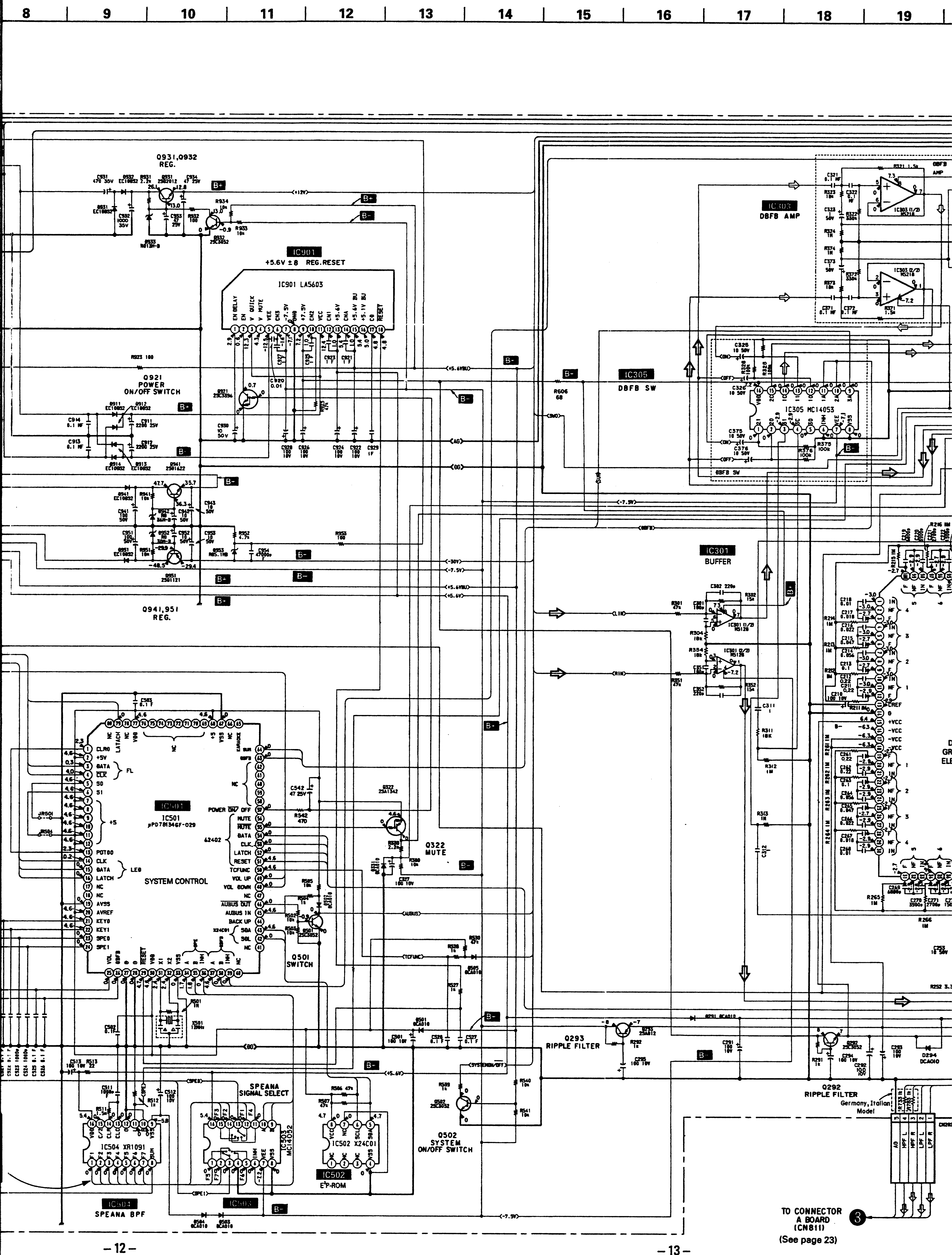

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
【JACK BOARD】
SYSTEM CONTROL 1
CN411
E, Saudi Arabia Model
OUT L
OUT R
ADAPTOR
IN R
IN L
Except E, Saudi Arabia Model
SUPER WOOFER OUT
CN412
SYSTEM CONTROL 2
1/3
2/3
3/3
CN415
R401
F402
F403
ICP402
ICP403
1-638-558-
11
ICP402, 403 : Except US, Canadian Model
F402, 403 : US, Canadian Model
【AUDIO BOARD】
CN201
CN202
CN203
CN204
CN205
IC201
IC501
IC502
IC901
D505
Q292
Q931
D933
D951
D504
US, Canadian Model
Except US, Canadian Model
1-638-557-
13
【TRANSFORMER A BOARD】
CN914
CN911
CN912
CN913
E, Saudi Arabia Model
1/2
2/2
1-603-555-
11
【TRANSFORMER C BOARD】
CN932
CN931
1-638-553-
11
T1
POWER TRANSFORMER
【TRANSFORMER B BOARD】
CN921
CN922
R921
ICP911
ICP912
3/3
2/3
1/3
1-638-556-
11
ICP911, 912 : Except US, Canadian Model
F911, 912 : US, Canadian Model
1-3
1-6
4
5
6
To DISPLAY, POWER AMP, POWER SUPPLY SECTION
(See page 19)

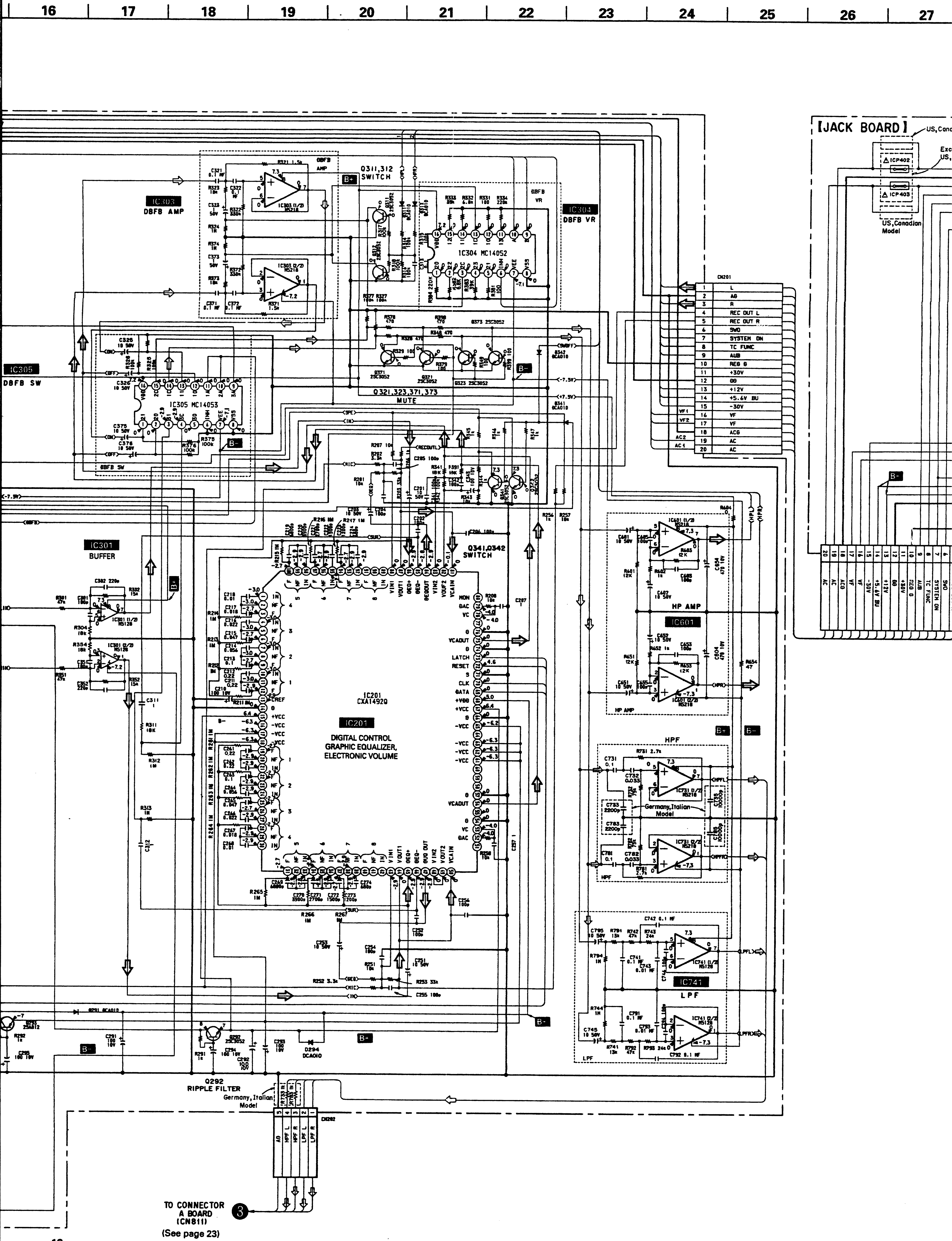
19

4725

3-5. SCHEMATIC DIAGRAM - MAIN SECTION -


1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O P
TRANSFORMER A BOARD
TRANSFORMER B BOARD
Except US, Canadian Model
POWER TRANSFORMER T1
CN911
CN912
CN913
COLD
HOT
GND
AC
E, Saudi Arabia Model
ICP911
ICP912
F911, F912 5A
R921 10 1/4W
US, Canadian Model
CN922
CN914
CN931
CN921
CN932
TRANSFORMER C BOARD
TO POWER SUPPLY BOARD (CN902, 904)
(See page 24)
CN203
VF ST
AG
AC G
AC
30
30 (GND)
VF TA
AUDIO BOARD
VF1
VF2
AC1
AC2
Q931, Q932 REG.
Q921 POWER ON/OFF SWITCH
Q941, 951 REG.
CN204
SW OFF
HP R
HP AG
HP L
TO CONNECTOR BOARD (CN401)
(See page 21)
CN205
MIC AG
MIC
-7.5V
+5.6V BU
+5.6V
VF
+35V
FL LATCH
FL DATA
FL CLK
KEY1
KEY0
LED LATCH
LED DATA
LED CLK
VOL DOWN
VOL UP
VOL DATA
DG
TO CONNECTOR BOARD (CN403)
(See page 21)
IC901
+5.6V ± 8
IC501
IC501 µPD78134GF-029
SYSTEM CONTROL
CLRO
+5V
DATA
CLK
FL
S0
S1
+5
POTDO
LED
NC
AVSS
AVREF
SPE0
SPE1
POWER ON/OFF
MUTE
LATCH
RESET
TCFUNC
VOL UP
VOL DOWN
AUBUS OUT
AUBUS IN
BACK UP
SDA
SDL
X501 12MHz
F1: 63Hz
F2: 100Hz
F3: 400Hz
F4: 1KHz
F5: 2.5KHz
F6: 6.3KHz
F7: 10KHz
IC504 XR1091
IC504 SPEANA BPF
SPEANA SIGNAL SELECT
IC503 MC14052
IC503
19


8
9
10
11
12
13
14
15
16
17
18
19
Q931,Q932
REG.
IC901
+5.6V ±8 REG.RESET
IC901 LA5603
EN DELAY
EN
V QUICK
V MUTE
VEE
CH3
-7.5V
GND
+7.5V
CH2
VCC
CH1
+5.6V
CHA
+5.6V BU
+5.1V BU
C0
RESET
Q921
POWER
ON/OFF SWITCH
Q941,951
REG.
IC303
DBFB AMP
IC303 (1/2) M5218
IC303 (2/2) M5218
IC305
DBFB SW
IC305 MC14053
DBFB SW
IC301
BUFFER
IC301 (1/2) M5218
IC301 (2/2) M5218
IC501
IC501
μPD78134GF-029
SYSTEM CONTROL
CLRO
+5V
DATA
CLK
SO
SI
FL
+5
POTDO
CLK
DATA
LATCH
LED
NC
AVSS
AVREF
KEY0
KEY1
SPE0
SPE1
SUR
DBFB
POWER ON/OFF
MUTE
MUTE
DATA
CLK
LATCH
RESET
TCFUNC
VOL UP
VOL DOWN
AUBUS OUT
AUBUS IN
BACK UP
X24C01
SDA
SCL
62402
Q322
MUTE
Q501
SWITCH
Q293
RIPPLE FILTER
Q292
RIPPLE FILTER
Germany, Italian Model
SPEANA
SIGNAL SELECT
IC503 MC14052
IC504 XR1091
IC504
SPEANA BPF
IC502 X24C01
IC502
E²P-ROM
IC503
Q502
SYSTEM
ON/OFF SWITCH
TO CONNECTOR
3
A BOARD
(CN811)
(See page 23)
AG
HPF L
HPF R
LPF L
LPF R
B+
B-
(+12V)
(+5.6VBU)
(+5.6V)
(AG)
(DG)
(-7.5V)
(-30V)
(DBFB)
(SW)
(LIN)
(RIN)
(AUBUS)
(TCFUNC)
(SYSTEMON/OFF)
(SPE0)
(SPE1)


16
17
18
19
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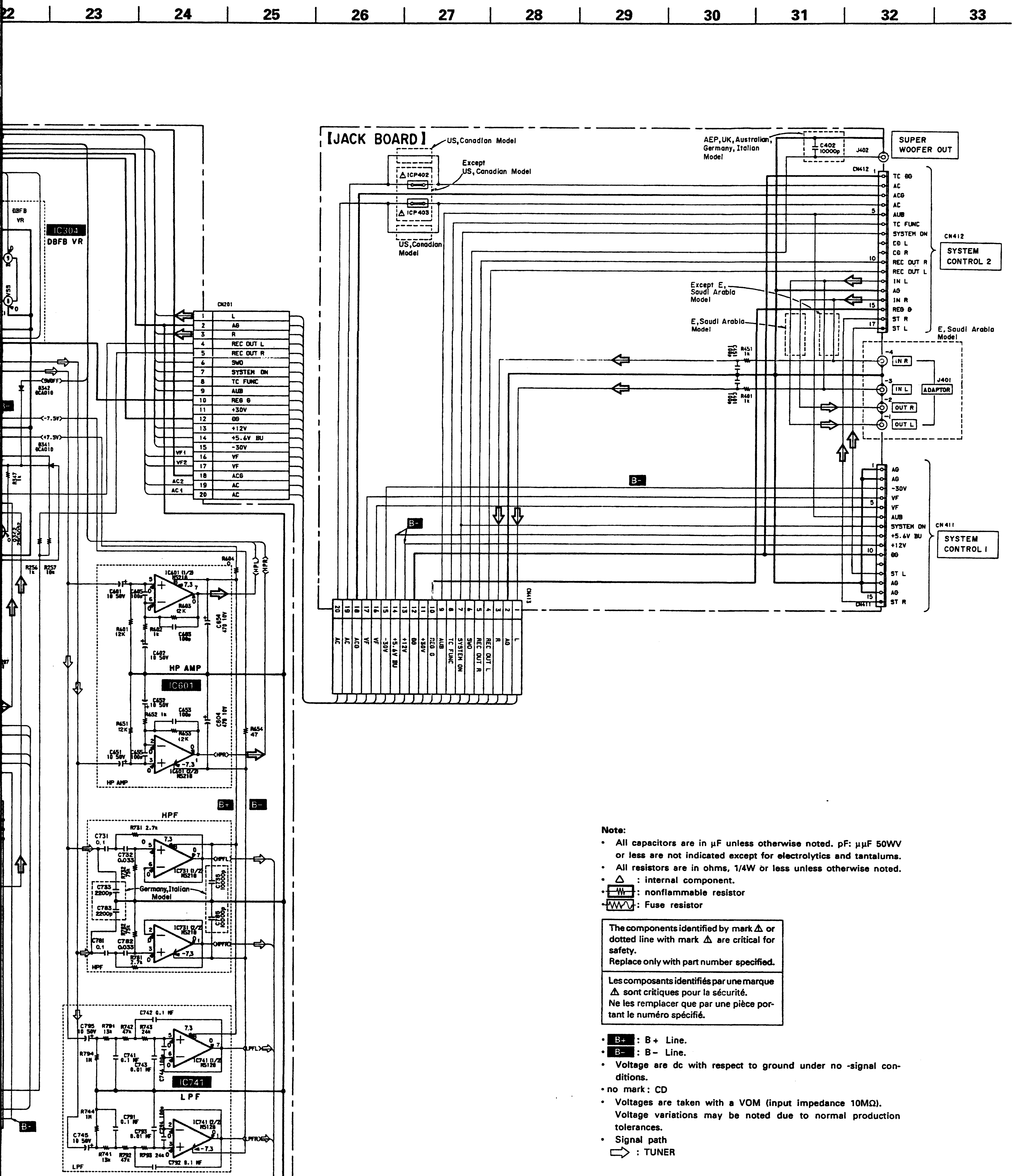
21
22
23
24
25
26
27
IC303
DBFB AMP
IC303 (1/2) M5218
IC303 (2/2) M5218
Q311,312 SWITCH
IC304
DBFB VR
IC304 MC14052
IC305
DBFB SW
IC305 MC14053
DBFB SW
Q321,323,371,373
MUTE
Q341,Q342 SWITCH
IC301
BUFFER
IC301 (1/2) M5128
IC301 (2/2) M5128
IC201
CXA1492Q
IC201
DIGITAL CONTROL GRAPHIC EQUALIZER, ELECTRONIC VOLUME
CN201
1 L
2 AG
3 R
4 REC OUT L
5 REC OUT R
6 SWO
7 SYSTEM ON
8 TC FUNC
9 AUG
10 REG G
11 +30V
12 GG
13 +12V
14 +5.6V BU
15 -30V
16 VF
17 VF
18 ACG
19 AC
20 AC
[JACK BOARD]
US,Canadian Model
ICP402
ICP403
HP AMP
IC601
IC401 (1/2) M5218
IC401 (2/2) M5218
HPF
IC731 (1/2) M5218
IC731 (2/2) M5218
Germany,Italian Model
IC741
LPF
IC741 (1/2) M5128
IC741 (2/2) M5128
Q292
RIPPLE FILTER
Germany,Italian Model
D294 DCA010
CN202
5 AG
4 HPF L
3 HPF R
2 LPF L
1 LPF R
TO CONNECTOR A BOARD (CN811)
(See page 23)
B+
B-


22
23
24
25
26
27
28
29
30
31
32
33
【JACK BOARD】
US,Canadian Model
Except US, Canadian Model
ICP402
ICP403
US,Canadian Model
AEP,UK,Australian, Germany, Italian Model
C402 10000p
J402
SUPER WOOFER OUT
CN412
TC GG
AC
ACG
AC
AUB
TC FUNC
SYSTEM ON
CD L
CD R
REC OUT R
REC OUT L
IN L
AG
IN R
REG 6
ST R
ST L
SYSTEM CONTROL 2
Except E, Saudi Arabia Model
E,Saudi Arabia Model
E, Saudi Arabia Model
R451 1k
R401 1k
J401
IN R
IN L
OUT R
OUT L
ADAPTOR
CN411
AG
AG
-30V
VF
VF
AUB
SYSTEM ON
+5.6V BU
+12V
GG
ST L
AG
AG
ST R
SYSTEM CONTROL 1
B-
CN413
CN201
L
AG
R
REC OUT L
REC OUT R
SWO
SYSTEM ON
TC FUNC
AUB
REG 6
+30V
GG
+12V
+5.6V BU
-30V
VF
VF
ACG
AC
AC
VF1
VF2
AC2
AC1
IC304
DBFB VR
HP AMP
IC601
IC601 (1/2) NJM4556
IC601 (2/2) NJM4556
HPF
IC731 (1/2) NJM4558
IC731 (2/2) NJM4558
Germany,Italian Model
LPF
IC741
IC741 (1/2) NJM4558
IC741 (2/2) NJM4558
B+
B-

Note:

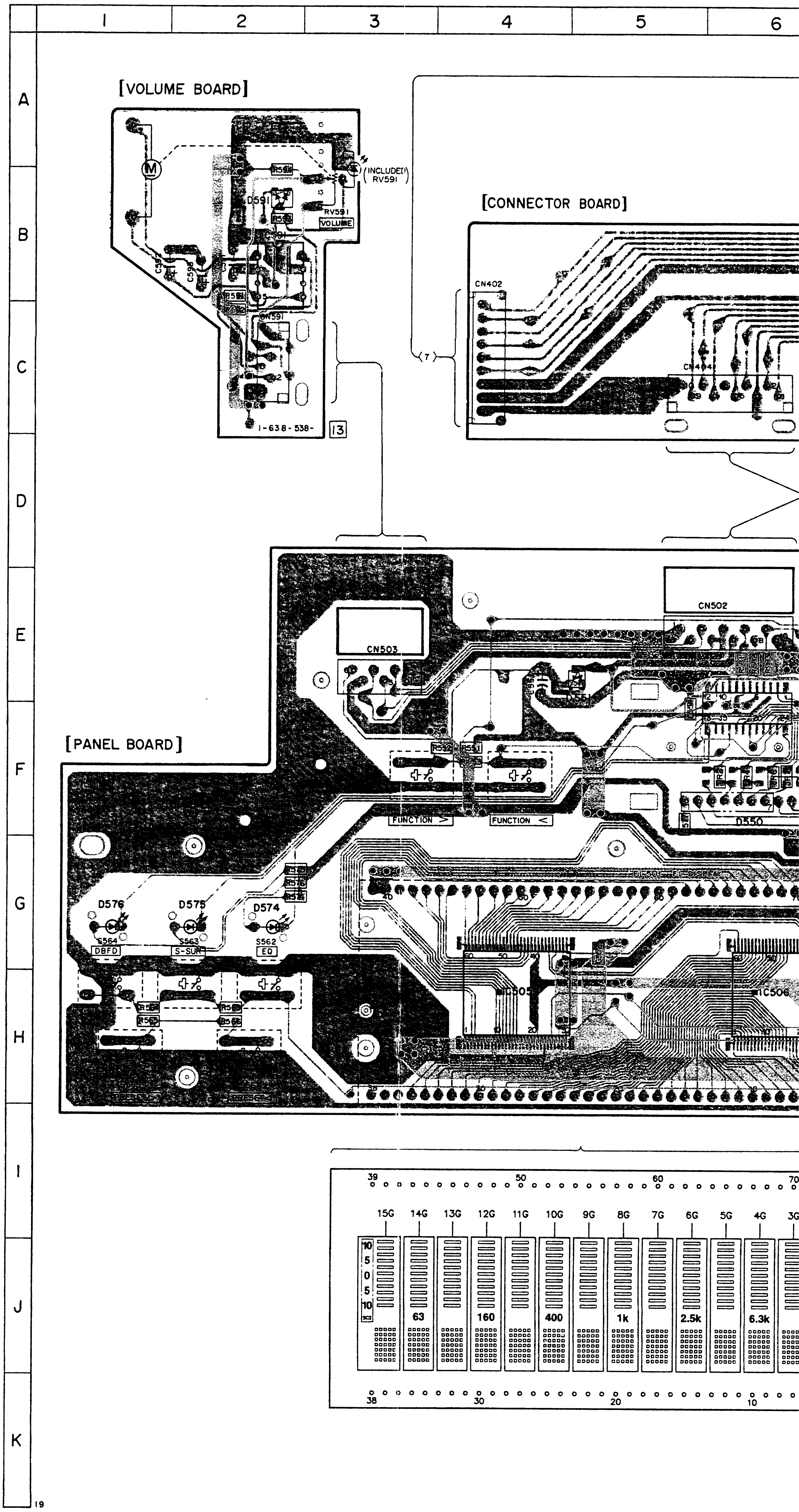
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : internal component.
- ▭ : nonflammable resistor
- ▭ : Fuse resistor

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B + Line.
- B- : B - Line.
- Voltage are dc with respect to ground under no -signal conditions.
- no mark : CD
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path
  ⇨ : TUNER

3-6. PRINTED WIRING BOARD - PANEL, POWER SECTION -



1
2
3
4
5
6
A
B
C
D
E
F
G
H
I
J
K
[VOLUME BOARD]
(INCLUDED RV591)
RV591
VOLUME
D591
CN591
1-638-538-
13
[CONNECTOR BOARD]
CN402
CN404
(7)
CN503
CN502
[PANEL BOARD]
FUNCTION >
FUNCTION <
D550
D551
D576
D575
D574
S564
S563
S562
DBFD
S-SUR
EQ
IC505
IC506
15G
14G
13G
12G
11G
10G
9G
8G
7G
6G
5G
4G
3G
63
160
400
1k
2.5k
6.3k
39
50
60
70
38
30
20
10
19

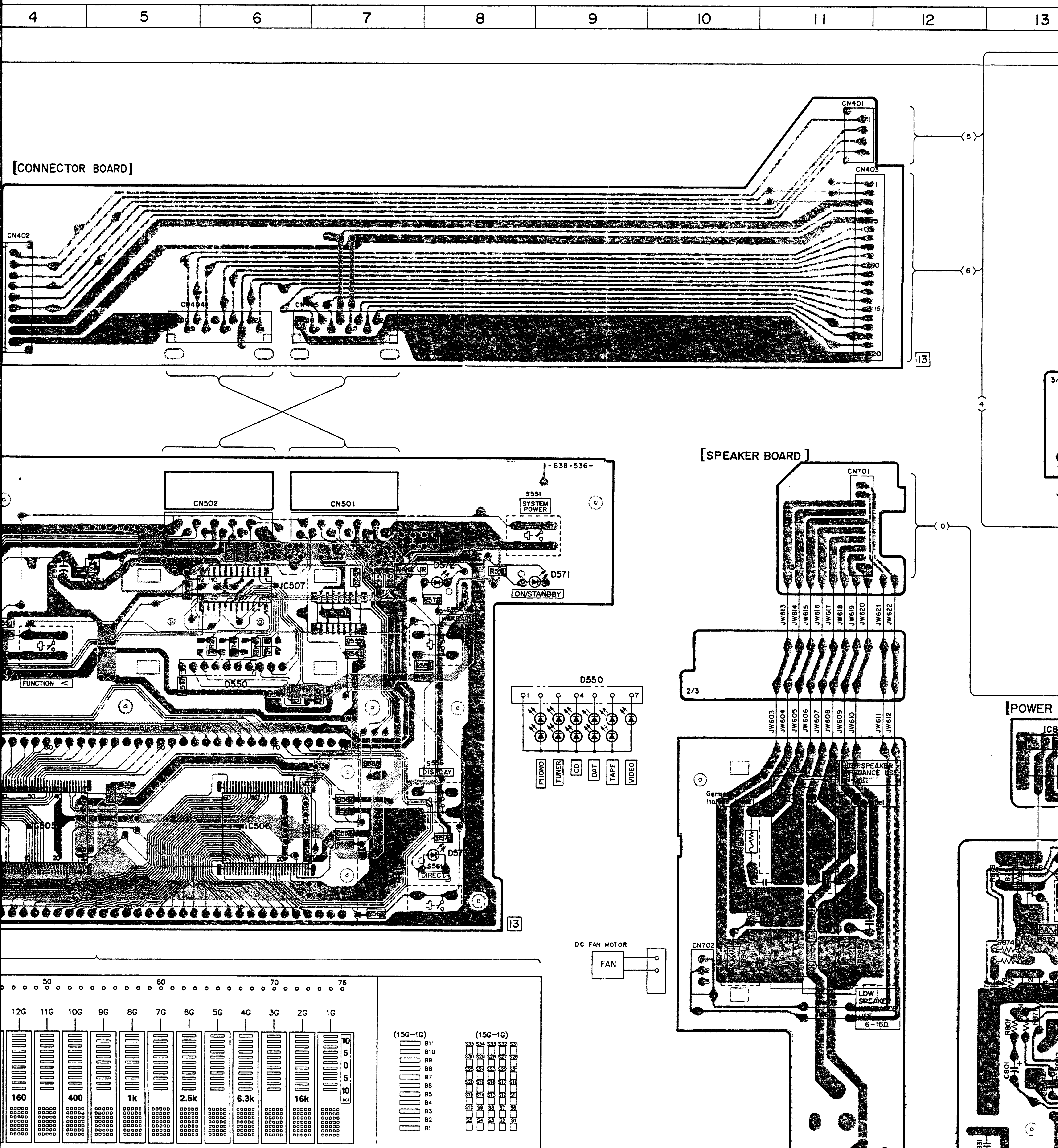
● SEMICONDUCTOR LOCATION

• PANEL/POWER BOARD

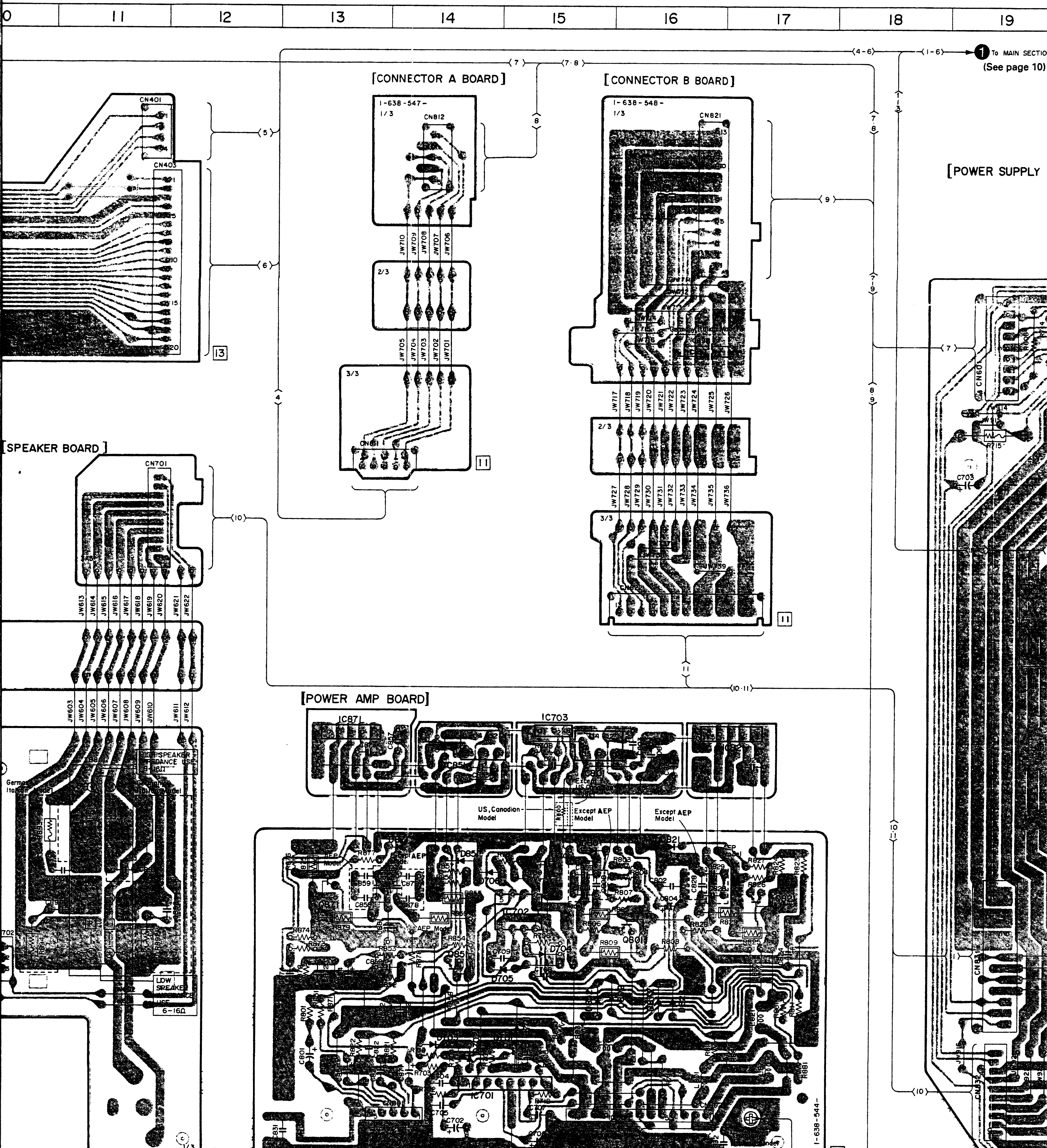
Ref. No	Location	Ref. No	Location
D550	F-6	IC505	H-4
D551	E-5	IC506	H-6
D571	E-9	IC507	E-6
D572	E-8	IC508	F-7
D573	H-8	IC591	B-2
D574	G-2	IC701	J-14
D575	G-2	IC702	H-15
D576	G-1	IC703	G-15
D591	B-2	IC801	G-15
D701	J-15	IC821	G-17
D702	J-14	IC851	G-14
D703	J-14	IC871	G-13
D704	I-15		
D705	I-15	Q611	C-21
D706	H-15	Q612	C-21
		Q701	J-15
D801	H-16	Q702	C-20
D802	I-16	Q801	I-16
D811	K-21		H-17
D812	K-20	Q821	
D821	H-16	Q851	I-14
		Q871	H-13
D822	I-16		
D851	H-14		
D852	I-15		
D871	H-14		
D872	I-16		
D901	E-21		
D902	D-22		
D903	D-22		

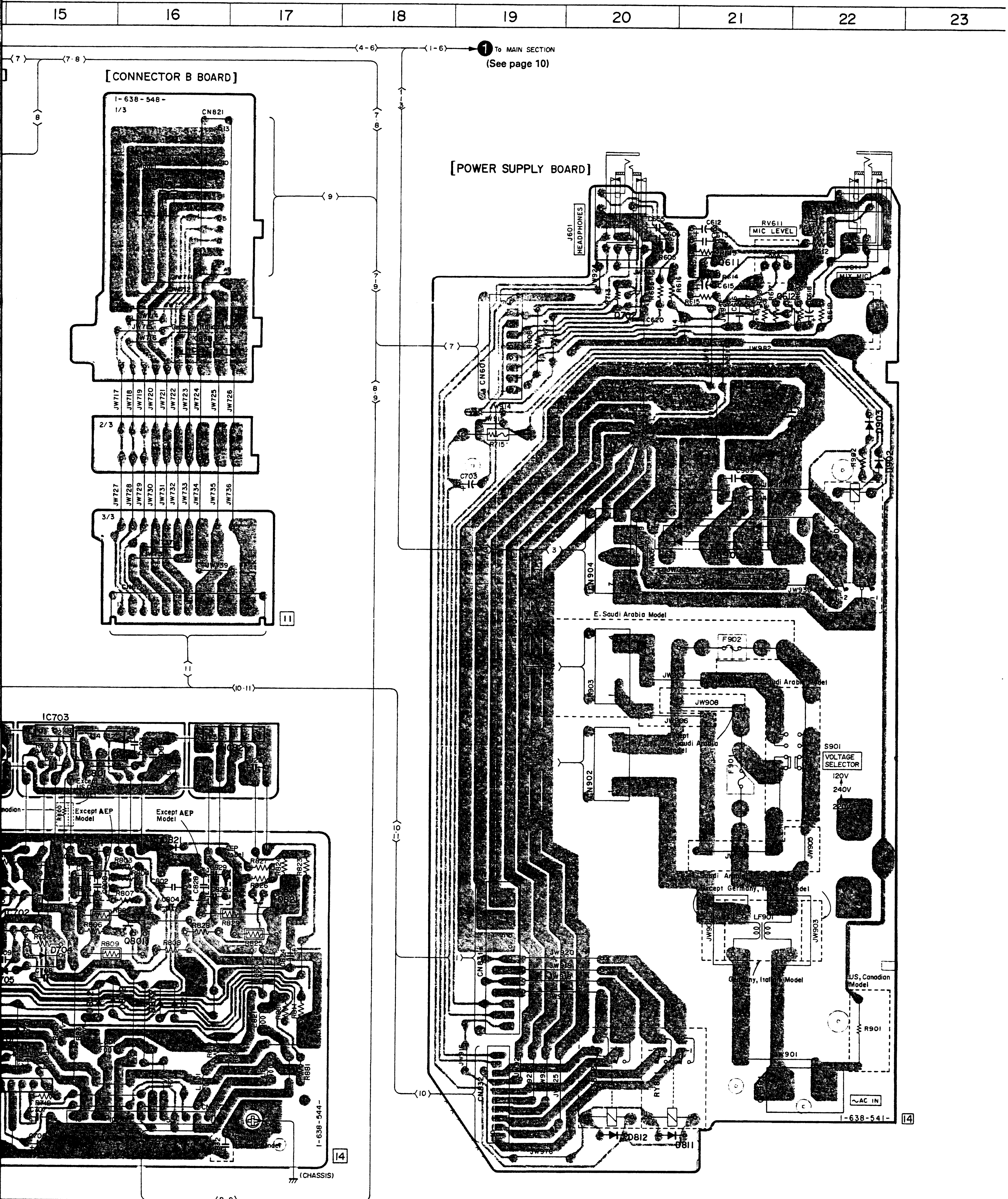
Note:

- ○——: indicated a lead wire mounted on the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.
- : Pattern of the rear side.

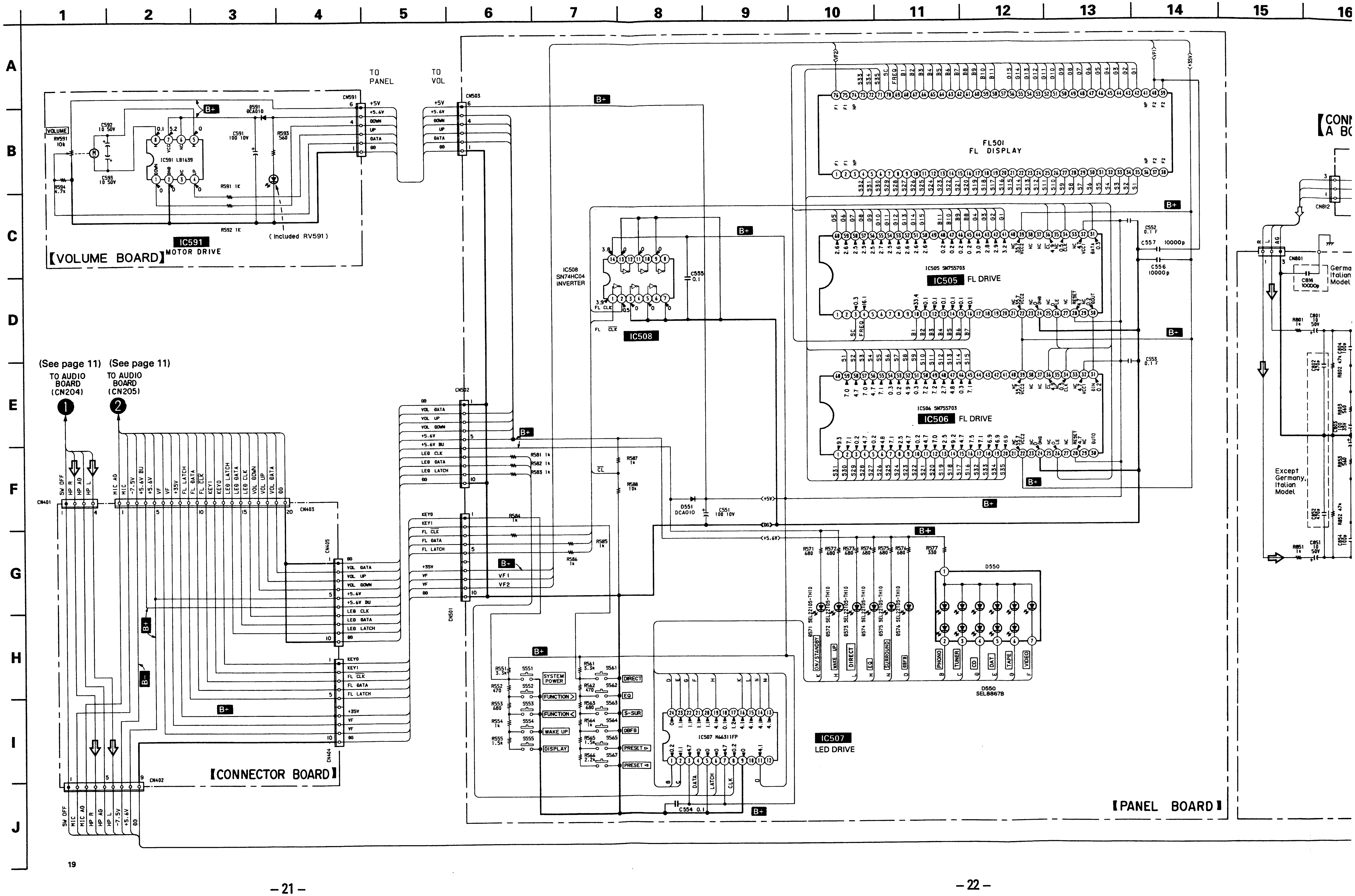


4
5
6
7
8
9
10
11
12
13
[CONNECTOR BOARD]
CN401
CN403
CN402
CN404
CN405
1
5
10
15
20
(5)
(6)
(4)
(10)
13
1-638-536-
CN502
CN501
S551
SYSTEM POWER
D571
ON/STANDBY
D572
TAKE UP
WAKE UP
IC507
IC505
IC506
D550
FUNCTION <
S555
DISPLAY
S561
DIRECT
D577
D550
1
4
7
PHONO
TUNER
CD
DAT
TAPE
VIDEO
12G
11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
160
400
1k
2.5k
6.3k
16k
10
5
0
5
10
50
60
70
76
30
20
10
1
(15G~1G)
B11
B10
B9
B8
B7
B6
B5
B4
B3
B2
B1
(15G~1G)
FL 501
FL DISPLAY
DC FAN MOTOR
FAN
[SPEAKER BOARD]
CN701
JW613
JW614
JW615
JW616
JW617
JW618
JW619
JW620
JW621
JW622
2/3
JW603
JW604
JW605
JW606
JW607
JW608
JW609
JW610
JW611
JW612
HIGH SPEAKER IMPEDANCE USE
German Italian model
CN702
R893
R894
LOW SPEAKER USE
6-16Ω
1/3
1-638-546-
11
[POWER
R874
R873
R879
R801
C801
C831


10
11
12
13
14
15
16
17
18
19
(4-6)
(1-6)
To MAIN SECTION
(See page 10)
(7)
(7·8)
[CONNECTOR A BOARD]
1-638-547-
1/3
CN812
JW710
JW709
JW708
JW707
JW706
2/3
JW705
JW704
JW703
JW702
JW701
3/3
CN811
11
[CONNECTOR B BOARD]
1-638-548-
1/3
CN821
JW717
JW718
JW719
JW720
JW721
JW722
JW723
JW724
JW725
JW726
2/3
JW727
JW728
JW729
JW730
JW731
JW732
JW733
JW734
JW735
JW736
3/3
11
[POWER SUPPLY
CN401
CN403
13
(5)
(6)
(8)
(9)
(7)
(4)
(10)
(10·11)
(8·9)
[SPEAKER BOARD]
CN701
JW613
JW614
JW615
JW616
JW617
JW618
JW619
JW620
JW621
JW622
JW603
JW604
JW605
JW606
JW607
JW608
JW609
JW610
JW611
JW612
HIGH SPEAKER IMPEDANCE USE
LOW SPEAKER IMPEDANCE USE
6-16Ω
1/3
1-638-546-
11
[POWER AMP BOARD]
IC871
IC703
IC701
US, Canadian Model
Except AEP Model
Except AEP Model
AEP Model
Q801
D705
C702
C703
CN601
1-638-544-
14
(CHASSIS)


15
16
17
18
19
20
21
22
23
To MAIN SECTION
(See page 10)
[CONNECTOR B BOARD]
1-638-548-
1/3
CN821
2/3
3/3
JW717
JW718
JW719
JW720
JW721
JW722
JW723
JW724
JW725
JW726
JW727
JW728
JW729
JW730
JW731
JW732
JW733
JW734
JW735
JW736
11
[POWER SUPPLY BOARD]
J601
HEADPHONES
C612
RV611
MIC LEVEL
MIX MIC
Q611
Q612
C620
CN601
JW982
R715
C703
D903
D902
R982
CN904
E. Saudi Arabia Model
F902
JW907
JW908
CN903
CN902
F901
S901
VOLTAGE SELECTOR
120V
240V
JW906
LF901
JW903
Germany, Italy Model
US, Canadian Model
R901
C901
~AC IN
1-638-541-
14
CN831
CN832
RY801
D812
D811
IC703
Except AEP Model
Except AEP Model
R803
R807
R809
Q801
C828
R829
R826
R881
1-638-544-
14
(CHASSIS)
(7)
(7·8)
(8)
(4-6)
(1-6)
(9)
(7)
(10·11)
(10)
(8·9)
(3)

3-6. SCHEMATIC DIAGRAM - PANEL, POWER SECTION -



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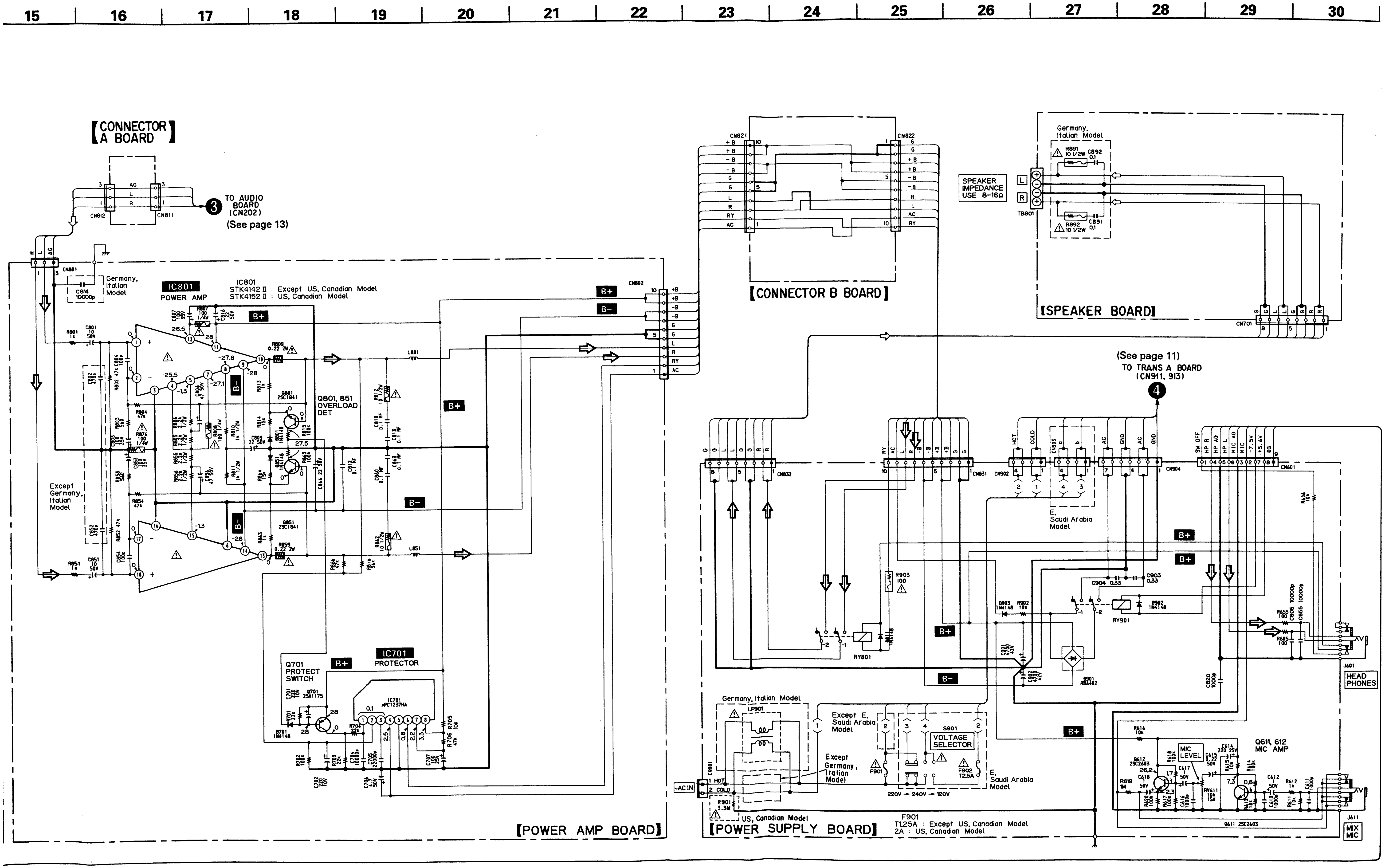
12
13
14
15
A
B
C
D
E
F
G
H
I
J
TO PANEL
TO VOL
CN591
CN503
B+
VOLUME
RV591 10k
IC591 LB1639
C591 100 10V
R593 560
D591 DCA010
R591 1K
R592 1K
R594 4.7k
C592 10 50V
C593 10 50V
(Included RV591)
IC591 MOTOR DRIVE
【VOLUME BOARD】
+5V
+5.6V
DOWN
UP
DATA
GD
IC508 SN74HC04 INVERTER
C555 0.1
FL CLK
IC508
FL501 FL DISPLAY
IC505 SN75S703
IC505 FL DRIVE
IC506 SN75S703
IC506 FL DRIVE
C552 0.1 F
C557 10000p
C556 10000p
C553 0.1 F
(See page 11) TO AUDIO BOARD (CN204)
(See page 11) TO AUDIO BOARD (CN205)
❶
❷
CN401
CN403
CN502
CN501
CN405
CN404
CN402
SW OFF
HP R
HP AG
HP L
MIC AG
MIC
-7.5V
+5.6V BU
VF
+35V
FL LATCH
FL DATA
FL CLK
KEY1
KEY0
LED LATCH
LED DATA
LED CLK
VOL DOWN
VOL UP
VOL DATA
GD
R581 1k
R582 1k
R583 1k
R584 1k
R585 1k
R586 1k
R587 1k
R588 10k
D551 DCA010
C551 100 10V
VF1
VF2
R571 680
R572 680
R573 680
R574 680
R575 680
R576 680
R577 330
D550
D571 SEL2105-TH10
D572 SEL2105-TH10
D573 SEL2105-TH10
D574 SEL2105-TH10
D575 SEL2105-TH10
D576 SEL2105-TH10
ON/STANDBY
WAKE UP
DIRECT
EQ
SURROUND
DBFB
PHONO
TUNER
CD
DAT
TAPE
VIDEO
D550 SEL8867B
S551 SYSTEM POWER
S552 FUNCTION >
S553 FUNCTION <
S554 WAKE UP
S555 DISPLAY
S561 DIRECT
S562 EQ
S563 S-SUR
S564 DBFB
S565 PRESET ▷
S567 PRESET ◁
R551 3.3k
R552 470
R553 680
R554 1k
R555 1.5k
R561 3.3k
R562 470
R563 680
R564 1k
R565 1.5k
R566 2.2k
IC507 M66311FP
IC507 LED DRIVE
DATA
LATCH
CLK
C554 0.1
【CONNECTOR BOARD】
【PANEL BOARD】
【CONN A BO
CN812
CN801
Germa Italian Model
Except Germany, Italian Model
C816 10000p
R801 1k
C801 10 50V
R851 1k
C851 10 50V


15
16
17
18
19
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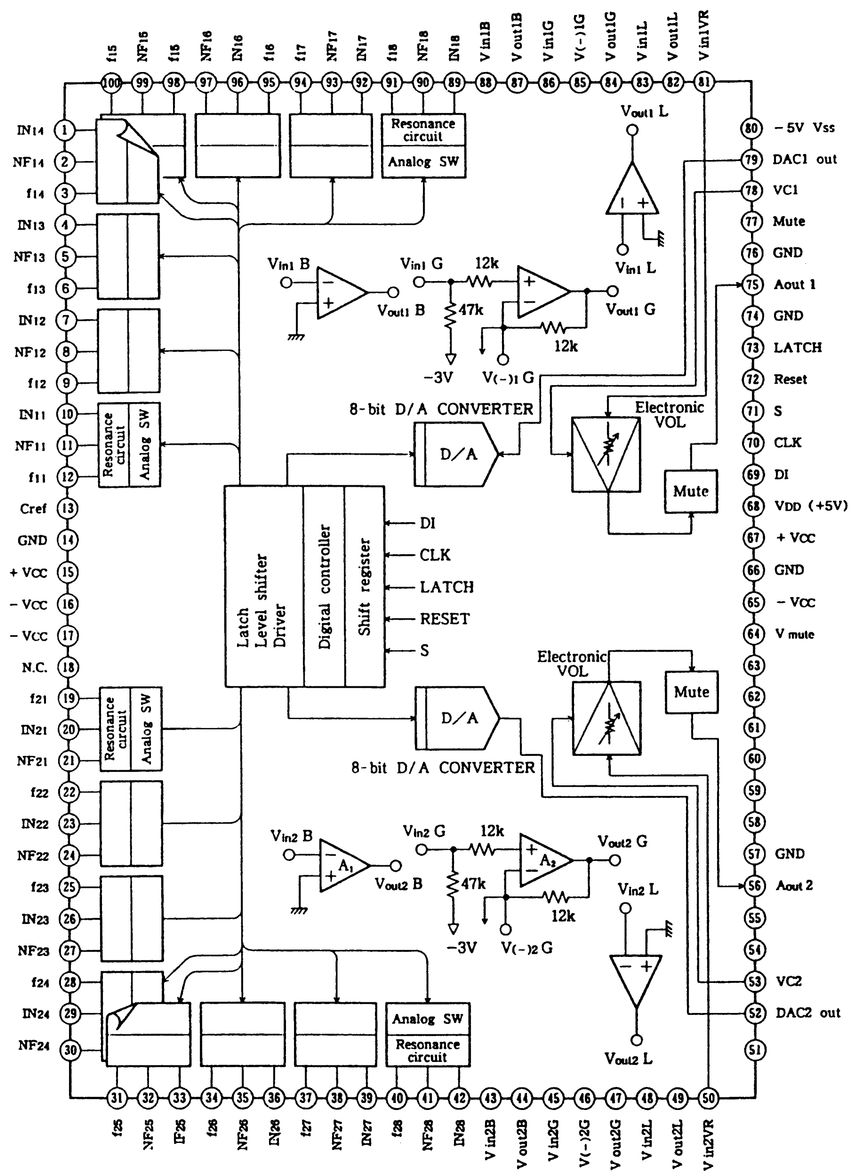
21
22
23
24
25
26
27
28
29
30
CONNECTOR A BOARD
CN812
CN811
TO AUDIO BOARD (CN202)
(See page 13)
CN801
Germany, Italian Model
C814 10000p
IC801 POWER AMP
IC801
STK4142 II : Except US, Canadian Model
STK4152 II : US, Canadian Model
B+
B-
CN802
Q801, 851 OVERLOAD DET
Q801 2SC1841
Q851 2SC1841
R809 0.22 2W
R859 0.22 2W
L801
L851
Except Germany, Italian Model
Q701 PROTECT SWITCH
IC701 PROTECTOR
IC701 μPC1237HA
Q701 2SA1175
D701 1N4148
POWER AMP BOARD
CN821
CN822
CONNECTOR B BOARD
SPEAKER IMPEDANCE USE 8-16Ω
Germany, Italian Model
R891 10 1/2W
C892 0.1
R892 10 1/2W
C891 0.1
TB801
SPEAKER BOARD
CN701
(See page 11)
TO TRANS A BOARD (CN911, 913)
CN832
CN831
CN902
CN903
CN904
CN601
E, Saudi Arabia Model
R903 100
D903 1N4148
R902 10k
D902 1N4148
RY901
C904 0.33
C903 0.33
RY801
D901 RB4402
C901 4700 42V
C902 4700 42V
C820 1000p
HEAD PHONES
J601
Germany, Italian Model
LF901
Except E, Saudi Arabia Model
S901 VOLTAGE SELECTOR
220V — 240V — 120V
Except Germany, Italian Model
F901
F902 T2.5A
E, Saudi Arabia Model
AC IN
CN901
HOT
COLD
R901 3.3M
US, Canadian Model
POWER SUPPLY BOARD
F901
T1.25A : Except US, Canadian Model
2A : US, Canadian Model
Q611, 612 MIC AMP
MIC LEVEL
RV611 10k 15A
Q611 2SC2603
Q612 2SC2603
MIX MIC
J611

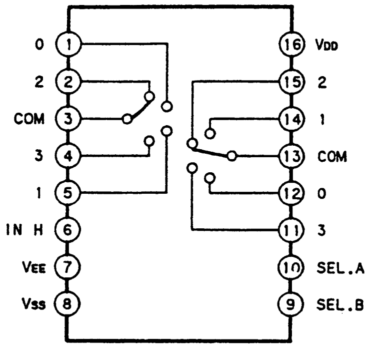
3-7. IC BLOCK DIAGRAMS

IC201 CXA1492Q



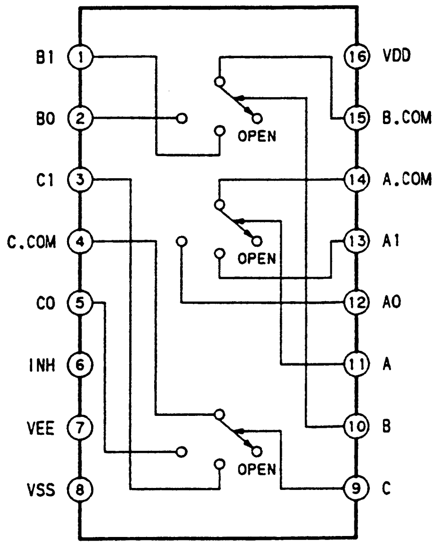
f15
NF15
f15
NF16
IN16
f16
f17
NF17
IN17
f18
NF18
IN18
VinIB
VoutIB
VinIG
V(-)IG
VoutIG
VinIL
VoutIL
VinIVR
IN14
NF14
f14
IN13
NF13
f13
IN12
NF12
f12
IN11
NF11
f11
Cref
GND
+VCC
-VCC
-VCC
N.C.
f21
IN21
NF21
f22
IN22
NF22
f23
IN23
NF23
f24
IN24
NF24
-5V Vss
DAC1 out
VC1
Mute
GND
Aout 1
GND
LATCH
Reset
S
CLK
DI
VDD (+5V)
+VCC
GND
-VCC
V mute
GND
Aout 2
VC2
DAC2 out
Resonance circuit
Analog SW
Vout1 L
Vin1 B
Vin1 G
12k
47k
Vout1 B
Vout1 G
Vin1 L
12k
-3V
V(-)1 G
8-bit D/A CONVERTER
D/A
Electronic VOL
Mute
Latch
Level shifter
Driver
Digital controller
Shift register
DI
CLK
LATCH
RESET
S
Electronic VOL
Mute
D/A
8-bit D/A CONVERTER
Vin2 B
Vin2 G
12k
A1
A2
Vout2 G
Vout2 B
47k
Vin2 L
12k
-3V
V(-)2 G
Analog SW
Resonance circuit
Vout2 L
f25
NF25
IF25
f26
NF26
IN26
f27
NF27
IN27
f28
NF28
IN28
Vin2B
Vout2B
Vin2G
V(-)2G
Vout2G
Vin2L
Vout2L
Vin2VR

IC304, 503 MC14052BF



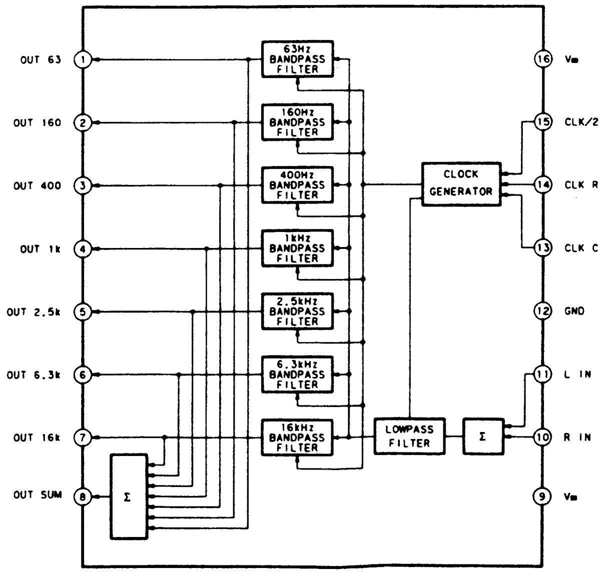
0
2
COM
3
1
IN H
VEE
Vss
VDD
2
1
COM
0
3
SEL.A
SEL.B

IC305 HD14053BFP



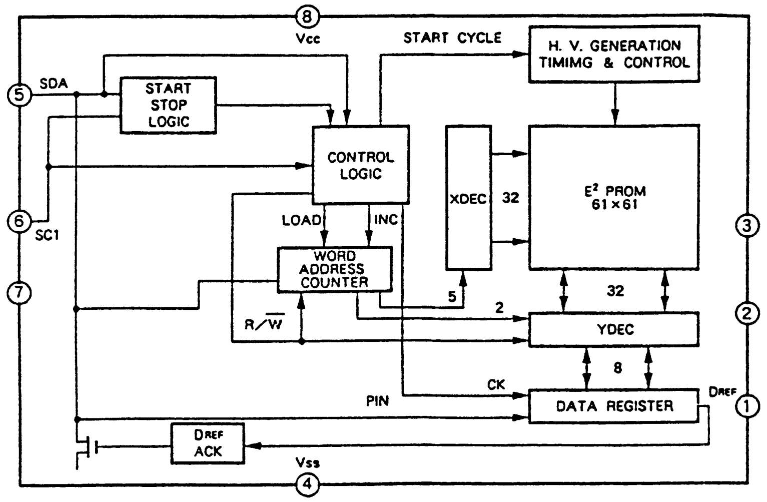
B1
B0
C1
C.COM
C0
INH
VEE
VSS
VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN
OPEN
OPEN

IC504 XR1091DCP



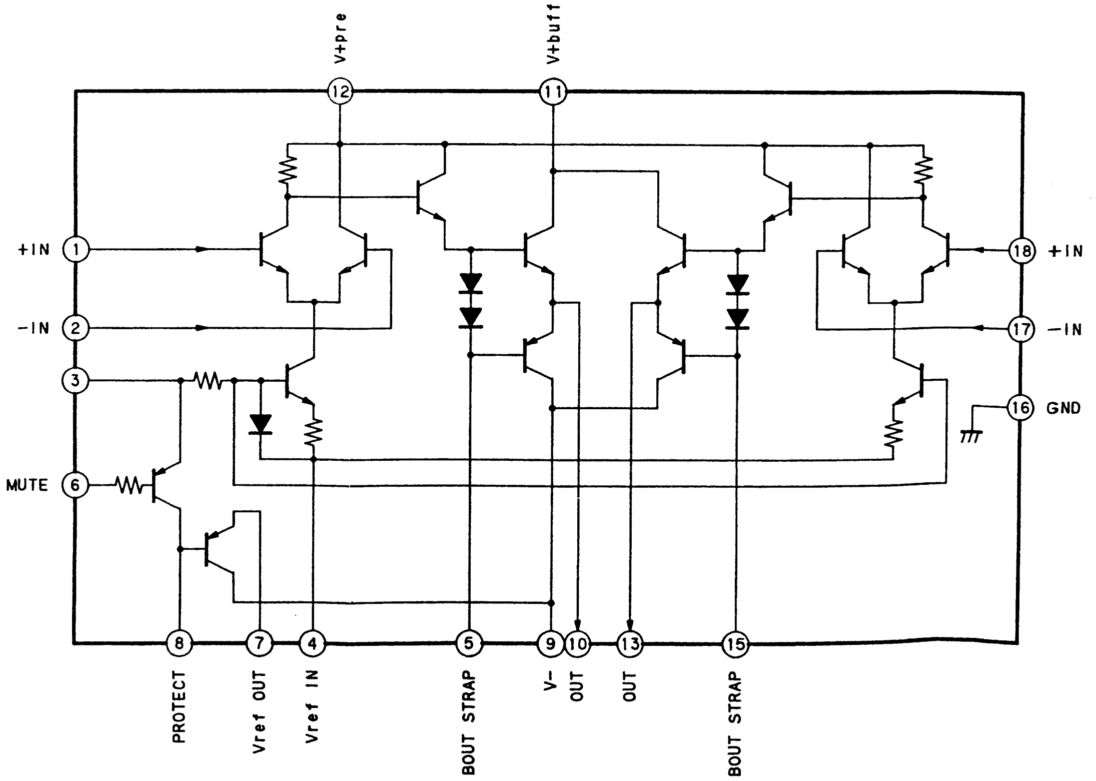
OUT 63
OUT 160
OUT 400
OUT 1k
OUT 2.5k
OUT 6.3k
OUT 16k
OUT SUM
63Hz BANDPASS FILTER
160Hz BANDPASS FILTER
400Hz BANDPASS FILTER
1kHz BANDPASS FILTER
2.5kHz BANDPASS FILTER
6.3kHz BANDPASS FILTER
16kHz BANDPASS FILTER
CLOCK GENERATOR
LOWPASS FILTER
Σ
Σ
Vcc
CLK/2
CLK R
CLK C
GND
L IN
R IN
Vss

IC502 X24C01P



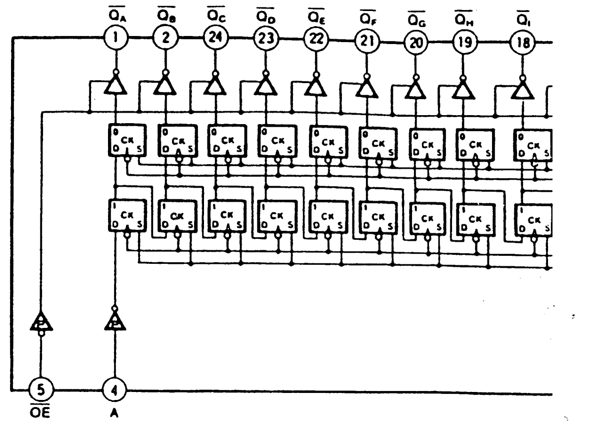
Vcc
START CYCLE
H. V. GENERATION TIMIMG & CONTROL
SDA
START STOP LOGIC
CONTROL LOGIC
XDEC
32
E² PROM 61×61
SC1
LOAD
INC
WORD ADDRESS COUNTER
R/W
5
2
32
YDEC
8
PIN
CK
DATA REGISTER
DREF
DREF ACK
Vss

IC801 STK4142II STK4152II

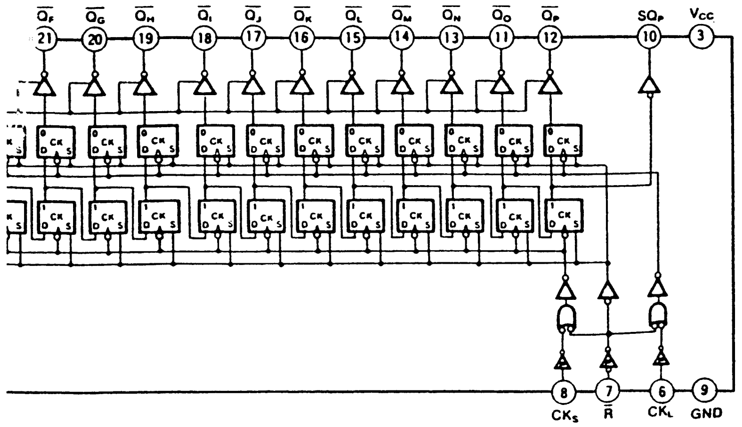


V+pre
V+buff
+IN
-IN
MUTE
+IN
-IN
GND
PROTECT
Vref OUT
Vref IN
BOUT STRAP
V-
OUT
OUT
BOUT STRAP

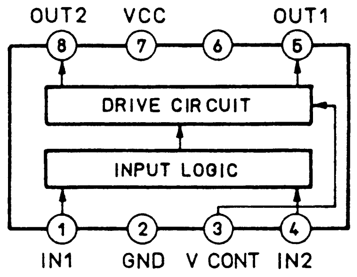
IC507 M66311FP



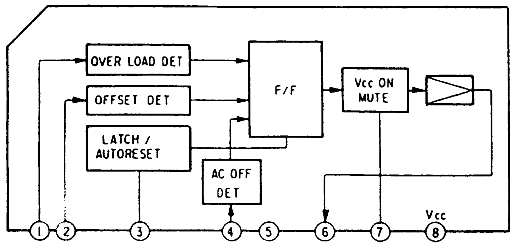
QA
QB
QC
QD
QE
QF
QG
QH
QI
CK
OE
A


SQP
Vcc
CKS
R
CKL
GND

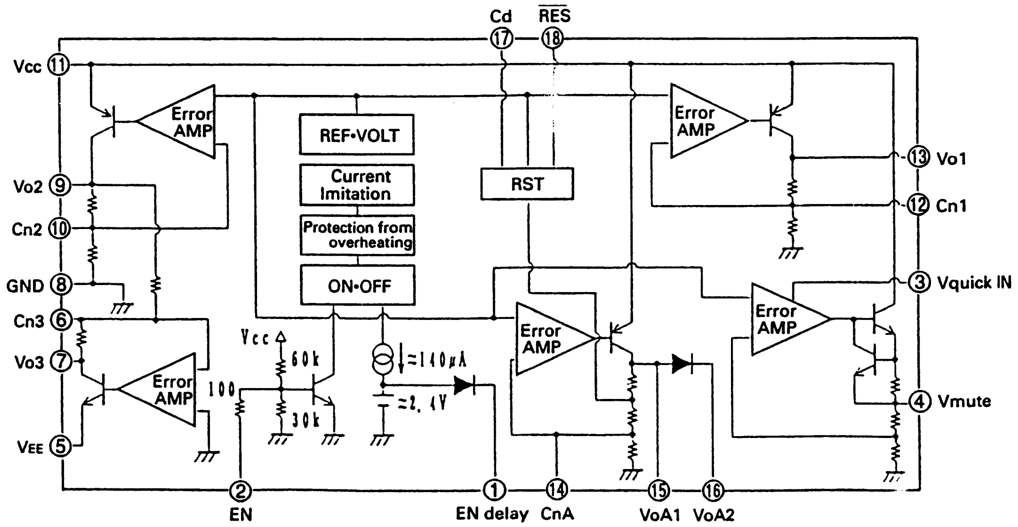
IC591 LB1639

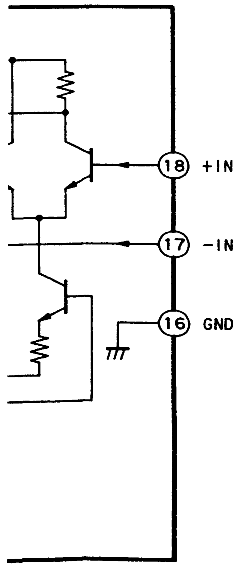

OUT2
VCC
OUT1
DRIVE CIRCUIT
INPUT LOGIC
IN1
GND
V CONT
IN2

IC701 μPC1237HA


OVER LOAD DET
OFFSET DET
LATCH / AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc

IC901 LA5603


Cd
RES
Vcc
Error AMP
REF•VOLT
Current Imitation
Protection from overheating
ON•OFF
RST
Vo1
Cn1
Vquick IN
Vmute
Vo2
Cn2
GND
Cn3
Vo3
VEE
EN
EN delay
CnA
VoA1
VoA2



3-8. PIN FUNCTIONS OF IC501 (μPD 78134-D29-3B9)

According to keying in or remote control signal, it sets the Graphic equalizer electronic volume (IC201), DBFB, surround etc. and switches the LED and FL tube display and functions in the deck.

Pin No.	Pin name	I/O	Description
1	CLR	I	Timer pulse input
2	+5V	I	Not in use with the equipment (+5V)
3	DATA	O	Serial data output to the FL tube driver (IC505, 506)
4	CLK	O	Data transfer clock output to the FL tube driver (IC505, 506)
5	S0	I	Input port for model selection. Connected to +5V(except US and Canadian model) or GND(US or Canadian model) with the equipment.
6	S1	I	Input port for model selection. Connected to +5V(US or Canadian model) or GND(except US and Canadian model) with the equipment.
7-12	–	I	Not in use with the equipment (+5V)
13	POT00	O	Timer pulse output (about 400μSec)
14	CLK	O	Data transfer clock output to the LED driver (IC507)
15	DATA	O	Serial data output to LED driver (IC507)
16	LATCH	O	Data latch output to the LED driver (IC507)
17-18	PWM 0, PWM 1	O	Not in use with the equipment (open)
19	AVss	–	Analog system power terminal (GND)
20	AVref	I	Analog port reference voltage input (+5V)
21-22	KEY 0, 1	I	Key input (Analog)*1
23-24	SPE 0, 1	I	Spectrum analysis data input (analog)
25	VOL	I	Volume position data input (analog)
26	DBFB	I	DBFB data input
27-28	–	I	Not in use with the equipment (GND)
29	RESET	I	System reset input. "L" : reset
30	VDD	–	Power terminal (+5V)
31-32	X2, X1	–	Crystal connection terminal for system clock oscillation
33	VSS	–	Power terminal (GND)
34	A	O	Spectrum analysis data input switch A
35	B	O	Spectrum analysis data input switch B
36	INH	O	Spectrum analysis data input switch inhibit
37	A	O	DBFB output switch A *2
38	B	O	DBFB output switch B *2
39	INH	O	DBFB output switch inhibit *2
40-41	–		Not in use with the equipment (open)
42	SCL	O	Clock output to EEP-ROM (IC502)
43	SDA	I/O	Data input/output (user preset memory data, etc.) with EEP-ROM (IC502)
44	–	O	Not in use with the equipment (open)
45	AU BUS IN	I	Audio bus input
46	AU BUS OUT	O	Audio bus output (tuner power ON/OFF and instruction to the function switch microcomputer in the deck)
47	–	O	Not in use with the equipment (open)
48	VOL DOWN	O	DOWN signal output of the volume motor (RV591)
49	VOL UP	O	UP signal output of the volume motor (RV591)
50	TC FUNC	I	Request of audio bus (FUNCTION data) from the function switch microcomputer in the deck (TC-H2600)

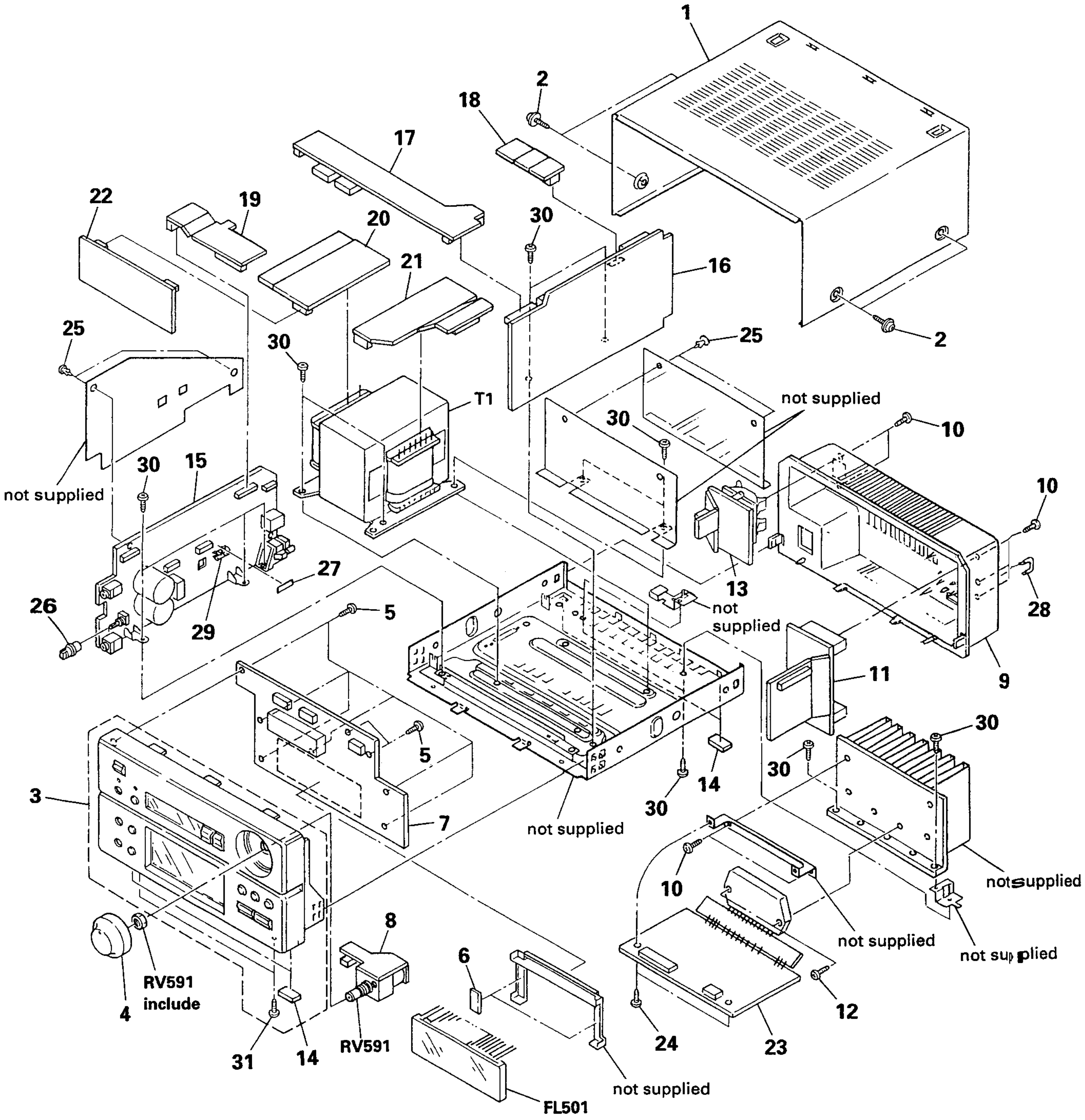
SECTION 4
EXPLODED VIEW

NOTE:

- –XX, –X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- CND : Canadian model
  G : Germany model
  IT : Italian model
  EA : Saudi Arabia model
  AUS : Australian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.


1
2
18
17
22
19
20
30
21
16
25
30
25
2
T1
not supplied
30
10
30
15
not supplied
10
27
26
29
5
13
not supplied
28
9
11
5
30
3
30
14
30
7
not supplied
10
notsupplied
8
not supplied
6
not su plied
RV591
include
4
12
31
14
RV591
24
23
not supplied
FL501

Pin No.	Pin name	I/O	Description
51	RESET	O	Reset output to the Graphic equalizer electronic volume (IC201) "L" : reset
52	LATCH	O	Data latch output to the Graphic equalizer electronic volume (IC201)
53	CLK	O	Data transfer clock output to the Graphic equalizer electronic volume (IC201)
54	DATA	O	Serial data output to the Graphic equalizer electronic volume (IC201)
55	MUTE	O	Mute reverse output
56	MUTE	O	Mute output
57	POWER ON/OFF	O	Power (IC901) output control. "L" : Power ON
58-62	–	O	Not in use with the equipment (open)
63	DBFB	O	DBFB ON/OFF (IC305) controller output. "H" : ON, "L" : OFF
64	SUR	O	Surround ON/OFF (IC302 1/2) controller output. "H" : surround ON
65	KARAOKE	O	Not in use with the equipment (open)
66	ASTB/CLO	O	Not in use with the equipment (open)
67	VSS	–	Power terminal (GND)
68	EA	I	Not in use with the equipment (open)
69-76	–	O	Not in use with the equipment (open)
77	VDD	–	Power terminal (+5V)
78	–	O	Not in use with the equipment (open)
79	LATCH	O	Data latch output to the FL tube driver (IC505, 506)
80	–	O	Not in use with the equipment (open)

***1 Key input (analog port)**

Voltage (V) Input port	0	0.63	1.3	2.0	2.6	3.2
Pin ㉑ KEY 0	POWER S551	FUNCTION AUDIO S552	FUNCTION VIDEO S553	WAKE UP S554	DISPLAY S555	——
Pin ㉒ KEY 1	DIRECT S561	EQ S562	SURROUND S563	DBFB S564	PRESET UP ▷ S565	PRESET DOWN ◁ S567

***2 DBFB level control**

Level Input port	OFF	1	2	3	4
Pin ㊲ A	–	L	H	L	H
Pin ㊳ B	–	L	L	H	H
Pin ㊴ INH	H	L	L	L	L

SECTION 5
ELECTRICAL PARTS LIST

AUDIO **PANEL**
VOLUME **CONNECTOR**

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF :μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remarks
*	A-4341-577-A	PANEL BOARD, COMPLETE (AEP, UK, E, EA, AUS)			
*	A-4341-581-A	PANEL BOARD, COMPLETE (G, IT)			
*	A-4345-442-A	PANEL BOARD, COMPLETE (US, CND)			
		**********************			
*	A-4341-582-A	AUDIO BOARD, COMPLETE (AEP, UK, AUS)			
*	A-4341-578-A	AUDIO BOARD, COMPLETE (E, EA)			
*	A-4341-593-A	AUDIO BOARD, COMPLETE (G, IT)			
*	A-4345-443-A	AUDIO BOARD, COMPLETE (US, CND)			
		**********************			
*	1-638-539-11	CONNECTOR BOARD			
		***************			
*	1-638-551-11	VOLUME BOARD			
		************			
*	4-932-810-11	CUSHION (FL)			
		(CAPACITOR)			
C201	1-124-907-11	ELECT	10uF	20%	50V
C202	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C203	1-124-907-11	ELECT	10uF	20%	50V
C204	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C205	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C206	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C207	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-124-443-00	ELECT	100uF	20%	10V
C211	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C212	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C213	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C214	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C215	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C216	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C217	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C218	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C219	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C220	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C221	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C222	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C223	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C224	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C251	1-124-907-11	ELECT	10uF	20%	50V
C252	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C253	1-124-907-11	ELECT	10uF	20%	50V
C254	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C255	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C256	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C257	1-164-346-11	CERAMIC CHIP	1uF		16V
C261	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C262	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C263	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C264	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C265	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C266	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C267	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C268	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C269	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C270	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C271	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C272	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C273	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C274	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C291	1-124-443-00	ELECT	100uF	20%	10V
C292	1-124-443-00	ELECT	100uF	20%	10V
C293	1-124-443-00	ELECT	100uF	20%	10V
C294	1-124-443-00	ELECT	100uF	20%	10V
C295	1-124-443-00	ELECT	100uF	20%	10V
C301	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C302	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C311	1-164-346-11	CERAMIC CHIP	1uF		16V
C312	1-164-346-11	CERAMIC CHIP	1uF		16V
C313	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C321	1-136-165-00	FILM	0.1uF	5%	50V
C322	1-136-165-00	FILM	0.1uF	5%	50V
C323	1-124-903-11	ELECT	1uF	20%	50V
C325	1-124-907-11	ELECT	10uF	20%	50V
C326	1-124-907-11	ELECT	10uF	20%	50V
C327	1-124-443-00	ELECT	100uF	20%	10V
C341	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C342	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C343	1-124-443-00	ELECT	100uF	20%	10V
C351	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C352	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C371	1-136-165-00	FILM	0.1uF	5%	50V

Ref. No.	Part No.	Description	Remarks
1	* 4-944-522-01	CASE (K211522)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4941-604-1	PANEL ASSY, FRONT (US, CND, AEP, UK, G, IT)	
	X-4941-605-1	PANEL ASSY, FRONT (E, EA, AUS)	
4	X-4941-532-1	KNOB (VOLUME) ASSY	
5	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
6	* 4-932-810-11	CUSHION (FL)	
7	* A-4341-577-A	PANEL BOARD, COMPLETE (AEP, UK, E, EA, AUS)	
	* A-4341-581-A	PANEL BOARD, COMPLETE (G, IT)	
	* A-4345-442-A	PANEL BOARD, COMPLETE (US, CND)	
8	* 1-638-551-11	VOLUME BOARD	
9	* 4-943-337-21	PANEL, BACK (US, CND, AEP, UK, G, IT, AUS)	
	* 4-943-337-11	PANEL, BACK (E, EA)	
10	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
11	* 1-638-558-11	JACK BOARD	
12	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
13	* 1-638-559-11	SPEAKER BOARD	
14	4-930-336-01	FOOT (FELT)	
15	* A-4341-583-A	POWER SUPPLY BOARD, COMPLETE(AEP, UK, AUS)	
	* A-4341-579-A	POWER SUPPLY BOARD, COMPLETE (E)	
	* A-4341-594-A	POWER SUPPLY BOARD, COMPLETE (G, IT)	
	* A-4341-844-A	POWER SUPPLY BOARD, COMPLETE (US, CND)	
	* A-4345-699-A	POWER SUPPLY BOARD, COMPLETE (EA)	
16	* A-4341-582-A	AUDIO BOARD, COMPLETE (AEP, UK, AUS)	
	* A-4341-578-A	AUDIO BOARD, COMPLETE (E, EA)	
	* A-4341-593-A	AUDIO BOARD, COMPLETE (G, IT)	
	* A-4345-443-A	AUDIO BOARD, COMPLETE (US, CND)	
17	* 1-638-539-11	CONNECTOR BOARD	
18	* 1-638-560-11	CONNECTOR (A) BOARD	
19	* 1-638-561-11	CONNECTOR (B) BOARD	
20	* 1-638-555-11	TRANSFORMER (A) BOARD	
21	* 1-638-556-11	TRANSFORMER (B) BOARD	
22	* 1-638-553-11	TRANSFORMER (C) BOARD	
23	* A-4345-441-A	POWER AMP BOARD, COMPLETE (AEP, UK, AUS)	
	* A-4341-571-A	POWER AMP BOARD, COMPLETE (E, EA)	
	* A-4345-438-A	POWER AMP BOARD, COMPLETE (G, IT)	
	* A-4345-763-A	POWER AMP BOARD, COMPLETE (US, CND)	
24	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
25	4-812-134-11	RIVET NYLON, 3.5	
26	4-932-882-11	KNOB (HP. VOL)	
27	3-701-947-12	LABEL (T1.25A), FUSE (AEP, UK, G, IT, E, EA, AUS)	
	3-701-946-13	LABEL (2A 250V), FUSE (US, CND)	
	3-701-948-18	LABEL (T2.5A), FUSE (E, EA)	
28	* 1-535-706-11	PLUG, JUMPER (E, EA)	
29	* 1-533-213-31	HOLDER, FUSE	
30	7-682-547-04	SCREW +BVTT 3X6 (S)	
31	7-682-547-09	SCREW +BVTT 3X6 (S)	

AUDIO PANEL VOLUME CONNECTOR

Ref. No.	Part No.	Description			Remarks
C372	1-136-165-00	FILM	0.1uF	5%	50V
C373	1-124-903-11	ELECT	1uF	20%	50V
C375	1-124-907-11	ELECT	10uF	20%	50V
C376	1-124-907-11	ELECT	10uF	20%	50V
C501	1-124-443-00	ELECT	100uF	20%	10V
C502	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C503	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C511	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C512	1-124-443-00	ELECT	100uF	20%	10V
C513	1-124-443-00	ELECT	100uF	20%	10V
C521	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C522	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C523	1-162-294-31	CERAMIC CHIP	0.001uF	10%	50V
C524	1-162-294-31	CERAMIC CHIP	0.001uF	10%	50V
C525	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C526	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C527	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C528	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C542	1-124-477-11	ELECT	47uF	20%	25V
C551	1-124-443-00	ELECT	100uF	20%	10V
C552	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C553	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C554	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C555	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C556	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C557	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C591	1-124-443-00	ELECT	100uF	20%	10V
C592	1-124-907-11	ELECT	10uF	20%	50V
C593	1-124-907-11	ELECT	10uF	20%	50V
C601	1-124-907-11	ELECT	10uF	20%	50V
C602	1-124-907-11	ELECT	10uF	20%	50V
C603	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C604	1-124-472-11	ELECT	470uF	20%	10V
C605	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C651	1-124-907-11	ELECT	10uF	20%	50V
C652	1-124-907-11	ELECT	10uF	20%	50V
C653	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C654	1-124-472-11	ELECT	470uF	20%	10V
C655	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C911	1-124-563-11	ELECT	2200uF	20%	25V
C912	1-124-563-11	ELECT	2200uF	20%	25V
C913	1-136-165-00	FILM	0.1uF	5%	50V
C914	1-136-165-00	FILM	0.1uF	5%	50V
C920	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C921	1-164-346-11	CERAMIC CHIP	1uF		16V
C922	1-124-443-00	ELECT	100uF	20%	10V
C923	1-164-346-11	CERAMIC CHIP	1uF		16V
C924	1-124-443-00	ELECT	100uF	20%	10V
C925	1-164-346-11	CERAMIC CHIP	1uF		16V
C926	1-124-443-00	ELECT	100uF	20%	10V
C927	1-164-346-11	CERAMIC CHIP	1uF		16V
C928	1-124-443-00	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remarks
C929	1-164-346-11	CERAMIC CHIP	1uF		16V
C930	1-124-907-11	ELECT	10uF	20%	50V
C931	1-126-104-11	ELECT	470uF	20%	35V
C932	1-126-105-11	ELECT	1000uF	20%	35V
C933	1-124-477-11	ELECT	47uF	20%	25V
C934	1-124-477-11	ELECT	47uF	20%	25V
C941	1-124-122-11	ELECT	100uF	20%	50V
C942	1-124-907-11	ELECT	10uF	20%	50V
C943	1-124-907-11	ELECT	10uF	20%	50V
C951	1-124-122-11	ELECT	100uF	20%	50V
C952	1-124-907-11	ELECT	10uF	20%	50V
C953	1-124-907-11	ELECT	10uF	20%	50V
C954	1-163-035-00	CERAMIC CHIP	0.047uF		50V

(CONNECTOR)

Ref. No.	Part No.	Description
CN201	* 1-566-154-11	CONNECTOR, BOARD TO BOARD 20P
CN202	* 1-569-499-11	PIN, CONNECTOR 3P
CN203	* 1-569-505-11	PIN, CONNECTOR 10P
CN204	* 1-569-396-11	PIN, CONNECTOR 4P
CN205	* 1-580-051-11	SOCKET, CONNECTOR 20P
CN401	* 1-569-397-11	SOCKET, CONNECTOR 4P
CN402	* 1-569-495-11	SOCKET, CONNECTOR 9P
CN403	* 1-580-050-11	PIN, CONNECTOR 20P
CN404	1-568-321-11	SOCKET, CONNECTOR 10P
CN405	1-568-321-11	SOCKET, CONNECTOR 10P
CN501	* 1-568-322-11	PLUG, CONNECTOR 10P
CN502	* 1-568-322-11	PLUG, CONNECTOR 10P
CN503	* 1-568-318-11	PLUG, CONNECTOR 6P
CN591	1-568-317-11	SOCKET, CONNECTOR 6P

(DIODE)

Ref. No.	Part No.	Description	
D291	8-719-990-36	DIODE	DCA010
D294	8-719-990-36	DIODE	DCA010
D311	8-719-990-36	DIODE	DCA010
D312	8-719-990-36	DIODE	DCA010
D331	8-719-990-36	DIODE	DCA010
D341	8-719-990-36	DIODE	DCA010
D342	8-719-990-36	DIODE	DCA010
D501	8-719-990-36	DIODE	DCA010
D502	8-719-990-36	DIODE	DCA010
D503	8-719-990-36	DIODE	DCA010
D504	8-719-990-36	DIODE	DCA010
D505	8-719-990-36	DIODE	DCA010
D550	8-719-313-71	DIODE	SEL8867B
D551	8-719-990-36	DIODE	DCA010
D571	8-719-301-37	DIODE	SEL2210S-CD
D572	8-719-301-37	DIODE	SEL2210S-CD
D573	8-719-301-37	DIODE	SEL2210S-CD
D574	8-719-301-37	DIODE	SEL2210S-CD
D575	8-719-301-37	DIODE	SEL2210S-CD
D576	8-719-301-37	DIODE	SEL2210S-CD
D591	8-719-990-36	DIODE	DCA010

When indicating parts by reference number, please include the board name.

AUDIO PANEL VOLUME CONNECTOR

Ref. No.	Part No.	Description	Remarks
D911	8-719-210-33	DIODE EC10DS2	
D912	8-719-210-33	DIODE EC10DS2	
D913	8-719-210-33	DIODE EC10DS2	
D914	8-719-210-33	DIODE EC10DS2	
D931	8-719-210-33	DIODE EC10DS2	
D932	8-719-210-33	DIODE EC10DS2	
D933	8-719-106-79	DIODE RD13M-B1	
D941	8-719-210-33	DIODE EC10DS2	
D942	8-719-118-15	DIODE RD36M-B	
D951	8-719-210-33	DIODE EC10DS2	
D952	8-719-118-09	DIODE RD30M-B	
D953	8-719-105-82	DIODE RD5.1M-B2	

(INDICATOR)

Ref. No.	Part No.	Description	Remarks
FL501	1-519-649-11	INDICATOR TUBE, FLUORESCENT	

(IC)

Ref. No.	Part No.	Description	Remarks
IC201	8-759-636-57	IC CXA1492Q	
IC301	8-759-636-55	IC M5218AFP	
IC303	8-759-636-55	IC M5218AFP	
IC304	8-759-516-41	IC CD4052BCM	
IC305	8-759-300-71	IC HD14053BFP	
IC501	8-759-153-02	IC uPD78134-D29-3B9	
IC502	8-759-500-31	IC X24C01P	
IC503	8-759-516-41	IC CD4052BCM	
IC504	8-759-991-11	IC XR1091DCP	
IC505	8-759-512-44	IC SN755703	
IC506	8-759-512-44	IC SN755703	
IC507	8-759-636-56	IC M66311FP	
IC508	8-759-925-74	IC SN74HC04ANS	
IC591	8-759-820-62	IC LB1639	
IC601	8-759-636-55	IC M5218AFP	
IC901	8-759-823-46	IC LA5603	

(CHIP JUMPER)

Ref. No.	Part No.	Description	Remarks
JR2	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR4	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR6	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR7	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR10	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR12	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR204	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR254	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR501	1-216-295-00	METAL CHIP 0 5% 1/10W	(US, CND)
JR502	1-216-295-00	METAL CHIP 0 5% 1/10W	(Except US, CND)
JR503	1-216-295-00	METAL CHIP 0 5% 1/10W	(Except US, CND)
JR504	1-216-295-00	METAL CHIP 0 5% 1/10W	(US, CND)
JR701	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR751	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR911	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR912	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR913	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR915	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR916	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR917	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR918	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR919	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR920	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR922	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR923	1-216-295-00	METAL CHIP 0 5% 1/10W	

(TRANSISTOR)

Ref. No.	Part No.	Description	Remarks
Q292	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q293	8-729-216-22	TRANSISTOR 2SA1162-G	
Q311	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q312	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q321	8-729-107-43	TRANSISTOR 2SC3624-L18	
Q322	8-729-805-67	TRANSISTOR 2SA1342	
Q323	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q341	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q342	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q371	8-729-107-43	TRANSISTOR 2SC3624-L18	
Q373	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q501	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q502	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q921	8-729-805-43	TRANSISTOR 2SC3396	
Q931	8-729-209-15	TRANSISTOR 2SD2012	
Q932	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q941	8-729-808-01	TRANSISTOR 2SD1622-S	
Q951	8-729-820-86	TRANSISTOR 2SB1121-ST	

(RESISTOR)

Ref. No.	Part No.	Description	Remarks
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R203	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R206	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R211	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R212	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R213	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R214	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R215	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R216	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R217	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R251	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R252	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R253	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R256	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R257	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R258	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R261	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R262	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R263	1-216-121-00	METAL CHIP 1M 5% 1/10W	

When indicating parts by reference number, please include the board name.

AUDIO PANEL VOLUME CONNECTOR

Ref. No.	Part No.	Description				Remarks
R264	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R265	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R266	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R267	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R291	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R292	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R301	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R302	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R304	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R311	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R312	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R313	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R314	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R315	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R316	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R317	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R318	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R321	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R322	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R323	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R324	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R325	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R326	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R327	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R328	1-216-041-00	METAL CHIP	470	5%	1/10W	
R329	1-216-025-00	METAL CHIP	100	5%	1/10W	
R330	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R331	1-216-025-00	METAL CHIP	100	5%	1/10W	
R332	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R333	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R334	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R341	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R342	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R343	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R344	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R345	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R346	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R347	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R348	1-216-041-00	METAL CHIP	470	5%	1/10W	
R349	1-216-025-00	METAL CHIP	100	5%	1/10W	
R351	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R352	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R354	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R371	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R372	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R373	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R374	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R375	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R376	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R377	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R378	1-216-041-00	METAL CHIP	470	5%	1/10W	
R379	1-216-025-00	METAL CHIP	100	5%	1/10W	
R380	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R381	1-216-025-00	METAL CHIP	100	5%	1/10W	
R382	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R383	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R384	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R391	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R398	1-216-041-00	METAL CHIP	470	5%	1/10W	
R399	1-216-025-00	METAL CHIP	100	5%	1/10W	
R501	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R502	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R503	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R504	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R505	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R506	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R507	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R511	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R512	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R513	1-216-009-00	METAL CHIP	22	5%	1/10W	
R521	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R522	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R523	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R524	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R525	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R526	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R527	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R528	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R530	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R531	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R532	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R533	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R534	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R535	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R536	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R537	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R538	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R539	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R540	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R541	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R542	1-216-041-00	METAL CHIP	470	5%	1/10W	
R551	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R552	1-216-041-00	METAL CHIP	470	5%	1/10W	
R553	1-216-045-00	METAL CHIP	680	5%	1/10W	
R554	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R555	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R561	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R562	1-216-041-00	METAL CHIP	470	5%	1/10W	
R563	1-216-045-00	METAL CHIP	680	5%	1/10W	
R564	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R565	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R566	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R571	1-216-045-00	METAL CHIP	680	5%	1/10W	
R572	1-216-045-00	METAL CHIP	680	5%	1/10W	

When indicating parts by reference number, please include the board name.

AUDIO | PANEL | VOLUME | CONNECTOR | POWER SUPPLY | POWER AMP | TRANSFORMER(A) | TRANSFORMER(B) | JACK | TRANSFORMER(C) | SPEAKER | CONNECTOR(A) | CONNECTOR(B)

Ref. No.	Part No.	Description	Remarks
R573	1-216-045-00	METAL CHIP 680 5% 1/10W	
R574	1-216-045-00	METAL CHIP 680 5% 1/10W	
R575	1-216-045-00	METAL CHIP 680 5% 1/10W	
R576	1-216-045-00	METAL CHIP 680 5% 1/10W	
R577	1-216-037-00	METAL CHIP 330 5% 1/10W	
R581	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R582	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R583	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R584	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R585	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R586	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R587	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R588	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R591	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R592	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R593	1-216-043-00	METAL CHIP 560 5% 1/10W	
R594	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R601	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R602	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R603	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R604	1-216-295-00	METAL CHIP 0 5% 1/10W	
R606	1-216-021-00	METAL CHIP 68 5% 1/10W	
R651	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R652	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R653	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R654	1-216-017-00	METAL CHIP 47 5% 1/10W	
R923	1-216-025-00	METAL CHIP 100 5% 1/10W	
R931	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R932	1-216-025-00	METAL CHIP 100 5% 1/10W	
R933	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R934	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R941	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R951	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R952	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R953	1-216-025-00	METAL CHIP 100 5% 1/10W	
		(VARIABLE RESISTOR)	
RV591	1-241-418-11	RES, VAR, CARBON 10K (VOLUME)	
		(SWITCH)	
S551	1-572-198-11	SWITCH, KEY BOARD (SYSTEM POWER)	
S552	1-572-198-11	SWITCH, KEY BOARD (FUNCTION >)	
S553	1-572-198-11	SWITCH, KEY BOARD (FUNCTION <)	
S554	1-572-198-11	SWITCH, KEY BOARD (WAKE UP)	
S555	1-572-198-11	SWITCH, KEY BOARD (DISPLAY)	
S561	1-572-198-11	SWITCH, KEY BOARD (DIRECT)	
S562	1-572-198-11	SWITCH, KEY BOARD (EQ)	
S563	1-572-198-11	SWITCH, KEY BOARD (S-SUR)	
S564	1-572-198-11	SWITCH, KEY BOARD (DBFB)	
S565	1-572-198-11	SWITCH, KEY BOARD (PRESET ▷)	
S567	1-572-198-11	SWITCH, KEY BOARD (PRESET ◁)	
		(CRYSTAL)	
X501	1-577-364-11	VIBRATOR, CERAMIC (12MHz)	

****

Ref. No.	Part No.	Description	Remarks
	* A-4341-583-A	POWER SUPPLY BOARD, COMPLETE(AEP, UK, AUS)	
	* A-4341-579-A	POWER SUPPLY BOARD, COMPLETE (E)	
	* A-4341-594-A	POWER SUPPLY BOARD, COMPLETE (G, IT)	
	* A-4341-844-A	POWER SUPPLY BOARD, COMPLETE (US, CND)	
	* A-4345-699-A	POWER SUPPLY BOARD, COMPLETE (EA)	
		****************************	
	* A-4345-441-A	POWER AMP BOARD, COMPLETE (AEP, UK, AUS)	
	* A-4341-571-A	POWER AMP BOARD, COMPLETE (E, EA)	
	* A-4345-438-A	POWER AMP BOARD, COMPLETE (G, IT)	
	* A-4345-763-A	POWER AMP BOARD, COMPLETE (US, CND)	
		*************************	
	* 1-638-553-11	TRANSFORMER (C) BOARD	
		*********************	
	* 1-638-555-11	TRANSFORMER (A) BOARD	
		*********************	
	* 1-638-556-11	TRANSFORMER (B) BOARD	
		*********************	
	* 1-638-558-11	JACK BOARD	
		**********	
	* 1-638-559-11	SPEAKER BOARD	
		*************	
	* 1-638-560-11	CONNECTOR (A) BOARD	
		*******************	
	* 1-638-561-11	CONNECTOR (B) BOARD	
		*******************	
	* 1-533-213-31	HOLDER, FUSE	
		(CAPACITOR)	
C401	1-162-282-31	CERAMIC 100PF 10% 50V	
C451	1-162-282-31	CERAMIC 100PF 10% 50V	
C605	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C611	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C612	1-124-903-11	ELECT 1uF 20% 50V	
C613	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C614	1-124-120-11	ELECT 220uF 20% 25V	
C615	1-124-464-11	ELECT 0.22uF 20% 50V	
C616	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C617	1-124-903-11	ELECT 1uF 20% 50V	
C618	1-124-903-11	ELECT 1uF 20% 50V	
C620	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C655	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C701	1-126-176-11	ELECT 220uF 20% 10V	
C702	1-126-176-11	ELECT 220uF 20% 10V	

When indicating parts by reference number, please include the board name.

POWER SUPPLY **POWER AMP** **TRANSFORMER(A)** **TRANSFORMER(B)**
JACK **TRANSFORMER(C)** **SPEAKER** **CONNECTOR(A)** **CONNECTOR(B)**

Ref. No.	Part No.	Description	Remarks
C704	1-162-306-11	CERAMIC 0.01uF 20%	16V
C705	1-161-494-00	CERAMIC 0.022uF	25V
C706	1-124-927-11	ELECT 4.7uF 20%	100V
C707	1-124-478-11	ELECT 100uF 20%	25V
C801	1-124-907-11	ELECT 10uF 20%	50V
C802	1-162-290-31	CERAMIC 470PF 10%	50V (Except G, IT)
C803	1-124-122-11	ELECT 100uF 20%	35V
C804	1-162-282-31	CERAMIC 100PF 10%	50V
C806	1-124-910-11	ELECT 47uF 20%	50V
C807	1-124-122-11	ELECT 100uF 20%	50V
C809	1-126-233-11	ELECT 22uF 20%	50V
C810	1-136-165-00	FILM 0.1uF 5%	50V
C812	1-136-165-00	FILM 0.1uF 5%	50V
C813	1-136-165-00	FILM 0.1uF 5%	50V
C814	1-164-095-11	CERAMIC 0.01uF 10%	16V (G, IT)
C816	1-126-233-11	ELECT 22uF 20%	50V
C851	1-124-907-11	ELECT 10uF 20%	50V
C852	1-162-290-31	CERAMIC 470PF 10%	50V (Except G, IT)
C853	1-124-122-11	ELECT 100uF 20%	35V
C854	1-162-282-31	CERAMIC 100PF 10%	50V
C856	1-124-910-11	ELECT 47uF 20%	50V
C860	1-136-165-00	FILM 0.1uF 5%	50V
C863	1-136-165-00	FILM 0.1uF 5%	50V
C866	1-126-233-11	ELECT 22uF 20%	50V
C891	1-136-165-00	FILM 0.1uF 5%	50V (G, IT)
C892	1-136-165-00	FILM 0.1uF 5%	50V (G, IT)
C901	1-126-224-11	ELECT 4700uF 20%	42V
C902	1-126-224-11	ELECT 4700uF 20%	42V
C903	1-136-171-00	FILM 0.33uF 5%	50V
C904	1-136-171-00	FILM 0.33uF 5%	50V
		⟨ CONNECTOR ⟩	
CN411	* 1-580-739-11	SOCKET, CONNECTOR 15P	
CN412	* 1-580-740-11	SOCKET, CONNECTOR 17P	
CN413	1-563-314-11	CONNECTOR, BOARD TO BOARD 20P	
CN601	* 1-569-504-11	PIN, CONNECTOR 9P	
CN701	1-563-310-11	CONNECTOR, BOARD TO BOARD 8P	
CN801	1-569-499-21	PIN, CONNECTOR 3P	
CN802	* 1-569-505-11	PIN, CONNECTOR 10P	
CN811	1-569-490-11	SOCKET, CONNECTOR 3P	
CN812	1-569-490-11	SOCKET, CONNECTOR 3P	
CN821	* 1-569-496-11	SOCKET, CONNECTOR 10P	
CN822	* 1-569-496-11	SOCKET, CONNECTOR 10P	
CN831	* 1-569-505-11	PIN, CONNECTOR 10P	
CN832	* 1-566-123-11	CONNECTOR, BOARD TO BOARD 8P	
CN901	⚠ 1-526-930-11	INLET, AC (US, CND, E)	
CN901	⚠ 1-526-931-11	INLET, AC (Except US, CND, E)	
CN902	* 1-580-940-11	PIN, CONNECTOR 4P	
CN903	* 1-580-940-11	PIN, CONNECTOR 4P (E, EA)	

Ref. No.	Part No.	Description	Remarks
CN904	* 1-569-502-11	PIN, CONNECTOR 7P	
CN911	* 1-580-939-11	SOCKET, CONNECTOR 4P	
CN912	* 1-580-939-11	SOCKET, CONNECTOR 4P (E, EA)	
CN913	* 1-569-493-11	SOCKET, CONNECTOR 7P	
CN914	* 1-569-502-11	PIN, CONNECTOR 7P	
CN921	* 1-569-502-11	PIN, CONNECTOR 7P	
CN922	* 1-569-496-11	SOCKET, CONNECTOR 10P	
CN931	* 1-569-493-11	SOCKET, CONNECTOR 7P	
CN932	* 1-569-493-11	SOCKET, CONNECTOR 7P	
		⟨ DIODE ⟩	
D701	8-719-912-20	DIODE 1SS120	
D801	8-719-912-20	DIODE 1SS120	
D811	8-719-912-20	DIODE 1SS120	
D851	8-719-912-20	DIODE 1SS120	
D901	8-719-312-09	DIODE RBA-402	
D902	8-719-912-20	DIODE 1SS120	
D903	8-719-912-20	DIODE 1SS120	
		⟨ FUSE ⟩	
F402	⚠ 1-532-782-21	FUSE, MICRO (SECONDARY) 4A (US, CND)	
F403	⚠ 1-532-782-21	FUSE, MICRO (SECONDARY) 4A (US, CND)	
F901	⚠ 1-532-285-00	FUSE T1.25A (Except US, CND)	
F901	⚠ 1-576-104-11	FUSE 2A (US, CND)	
F902	⚠ 1-532-286-00	FUSE T2.5A (E, EA)	
F911	⚠ 1-532-783-21	FUSE, MICRO (SECONDARY) 5A (US, CND)	
F912	⚠ 1-532-783-21	FUSE, MICRO (SECONDARY) 5A (US, CND)	
		⟨ IC ⟩	
IC701	8-759-111-68	IC uPC1237HA	
IC801	8-749-900-96	IC STK4142MK2 (Except US, CND)	
IC801	8-749-920-09	IC STK4152MK2 (US, CND)	
		⟨ IC LINK ⟩	
ICP402	⚠ 1-532-845-21	LINK, IC (Except US, CND)	
ICP403	⚠ 1-532-845-21	LINK, IC (Except US, CND)	
ICP911	⚠ 1-532-846-21	LINK, IC (Except US, CND)	
ICP912	⚠ 1-532-846-21	LINK, IC (Except US, CND)	
		⟨ JACK ⟩	
J401	1-565-304-11	JACK, PIN 4P (E, EA)	
J402	1-569-662-11	JACK, PIN 1P	
J601	1-562-837-21	JACK	
J611	1-562-837-21	JACK	
		⟨ COIL ⟩	
L801	* 1-420-872-00	COIL, AIR CORE	
L851	* 1-420-872-00	COIL, AIR CORE	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

POWER SUPPLY | POWER AMP | TRANSFORMER(A) | TRANSFORMER(B) | JACK | TRANSFORMER(C) | SPEAKER | CONNECTOR(A) | CONNECTOR(B)

Ref. No.	Part No.	Description	Remarks
		(LINE FILTER)	
LF901 ⚠	1-424-485-11	FILTER, LINE (G, IT)	
		(TRANSISTOR)	
Q611	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q612	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
		(RESISTOR)	
R401	1-249-417-11	CARBON 1K 5% 1/4W	
R451	1-249-417-11	CARBON 1K 5% 1/4W	
R605	1-249-405-11	CARBON 100 5% 1/4W	
R606	1-249-429-11	CARBON 10K 5% 1/4W	
R611	1-249-429-11	CARBON 10K 5% 1/4W	
R612	1-249-417-11	CARBON 1K 5% 1/4W	
R613	1-249-429-11	CARBON 10K 5% 1/4W	
R614	1-249-441-11	CARBON 100K 5% 1/4W	
R615	1-249-429-11	CARBON 10K 5% 1/4W	
R616	1-249-429-11	CARBON 10K 5% 1/4W	
R617	1-249-441-11	CARBON 100K 5% 1/4W	
R618	1-249-441-11	CARBON 100K 5% 1/4W	
R619	1-247-903-00	CARBON 1M 5% 1/4W	
R620	1-249-441-11	CARBON 100K 5% 1/4W	
R655	1-249-405-11	CARBON 100 5% 1/4W	
R701	1-249-433-11	CARBON 22K 5% 1/4W	
R702	1-249-441-11	CARBON 100K 5% 1/4W	
R703	1-249-433-11	CARBON 22K 5% 1/4W	
R704	1-249-433-11	CARBON 22K 5% 1/4W	
R705	1-249-429-11	CARBON 10K 5% 1/4W	
R706	1-249-437-11	CARBON 47K 5% 1/4W	
R801	1-249-417-11	CARBON 1K 5% 1/4W	
R802	1-249-437-11	CARBON 47K 5% 1/4W	
R803	1-249-414-11	CARBON 560 5% 1/4W	
R804	1-249-437-11	CARBON 47K 5% 1/4W	
R805	1-247-756-11	CARBON 2.2K 5% 1/2W	
R806	1-247-756-11	CARBON 2.2K 5% 1/2W	
R807 ⚠	1-212-881-11	FUSIBLE 100 5% 1/4W	F
R808 ⚠	1-212-881-11	FUSIBLE 100 5% 1/4W	F
R809 ⚠	1-217-151-00	RES, METAL PLATE 0.22 2W	
R810	1-247-752-11	CARBON 1K 5% 1/2W	
R811	1-247-752-11	CARBON 1K 5% 1/2W	
R812 ⚠	1-212-958-00	FUSIBLE 10 5% 1/2W	F
R813	1-249-417-11	CARBON 1K 5% 1/4W	
R814	1-249-431-11	CARBON 15K 5% 1/4W	
R815	1-249-441-11	CARBON 100K 5% 1/4W	
R816	1-249-438-11	CARBON 56K 5% 1/4W	
R851	1-249-417-11	CARBON 1K 5% 1/4W	
R852	1-249-437-11	CARBON 47K 5% 1/4W	
R853	1-249-414-11	CARBON 560 5% 1/4W	
R854	1-249-437-11	CARBON 47K 5% 1/4W	
R855	1-247-756-11	CARBON 2.2K 5% 1/2W	
R856	1-247-756-11	CARBON 2.2K 5% 1/2W	
R859 ⚠	1-217-151-00	RES, METAL PLATE 0.22 2W	
R862 ⚠	1-212-958-00	FUSIBLE 10 5% 1/2W	F
R863	1-249-417-11	CARBON 1K 5% 1/4W	
R864	1-249-431-11	CARBON 15K 5% 1/4W	
R865	1-249-441-11	CARBON 100K 5% 1/4W	
R866	1-249-437-11	CARBON 47K 5% 1/4W	
R876 ⚠	1-212-881-11	FUSIBLE 100 5% 1/4W	F
R891 ⚠	1-244-825-00	CARBON 10 5% 1/2W	(G, IT)
R892 ⚠	1-244-825-00	CARBON 10 5% 1/2W	(G, IT)
R901 ⚠	1-202-725-00	SOLID 3.3M 10% 1/2W	(US, CND)
R902	1-249-429-11	CARBON 10K 5% 1/4W	
R903 ⚠	1-212-881-11	FUSIBLE 100 5% 1/4W	F
R921 ⚠	1-212-857-00	FUSIBLE 10 5% 1/4W	F
R925	1-216-089-00	METAL CHIP 47K 5% 1/10W	
		(VARIABLE RESISTOR)	
RV611	1-241-140-11	RES, VAR, CARBON 10K (MIC LEVEL)	
		(RELAY)	
RY801	1-515-533-11	RELAY	
RY901	1-515-626-11	RELAY	
		(VOLTAGE SELECTOR)	
S901 ⚠	1-572-009-11	SELECTOR, VOLTAGE (E, EA)	
		(TERMINAL BOARD)	
TB801	1-537-276-21	TERMINAL BOARD (SP)	
		(TRANSFORMER)	
T1 ⚠	1-450-380-11	TRANSFORMER, POWER (AEP, G, IT)	
T1 ⚠	1-450-381-11	TRANSFORMER, POWER (UK, AUS)	
T1 ⚠	1-450-382-11	TRANSFORMER, POWER (E, EA)	
T1 ⚠	1-450-383-11	TRANSFORMER, POWER (US, CND)	

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	Remarks
*	1-535-706-11	PLUG, JUMPER (E, EA)	
	1-533-213-31	HOLDER, FUSE	

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When indicating parts by reference number, please include the board name.

9-956-472-11

Sony Corporation

Audio Group

English
91F1995-1
Printed in Japan

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TA-H2600

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SUPPLEMENT-1

File this supplement with the service manual.

Description Additional to the Block Diagram

No block diagram is shown in the service manual, so it is contained in this supplement.
Refer also to the service manual for the TA-H2600.

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Sony Corporation
Audio Group

English
91G1995-1
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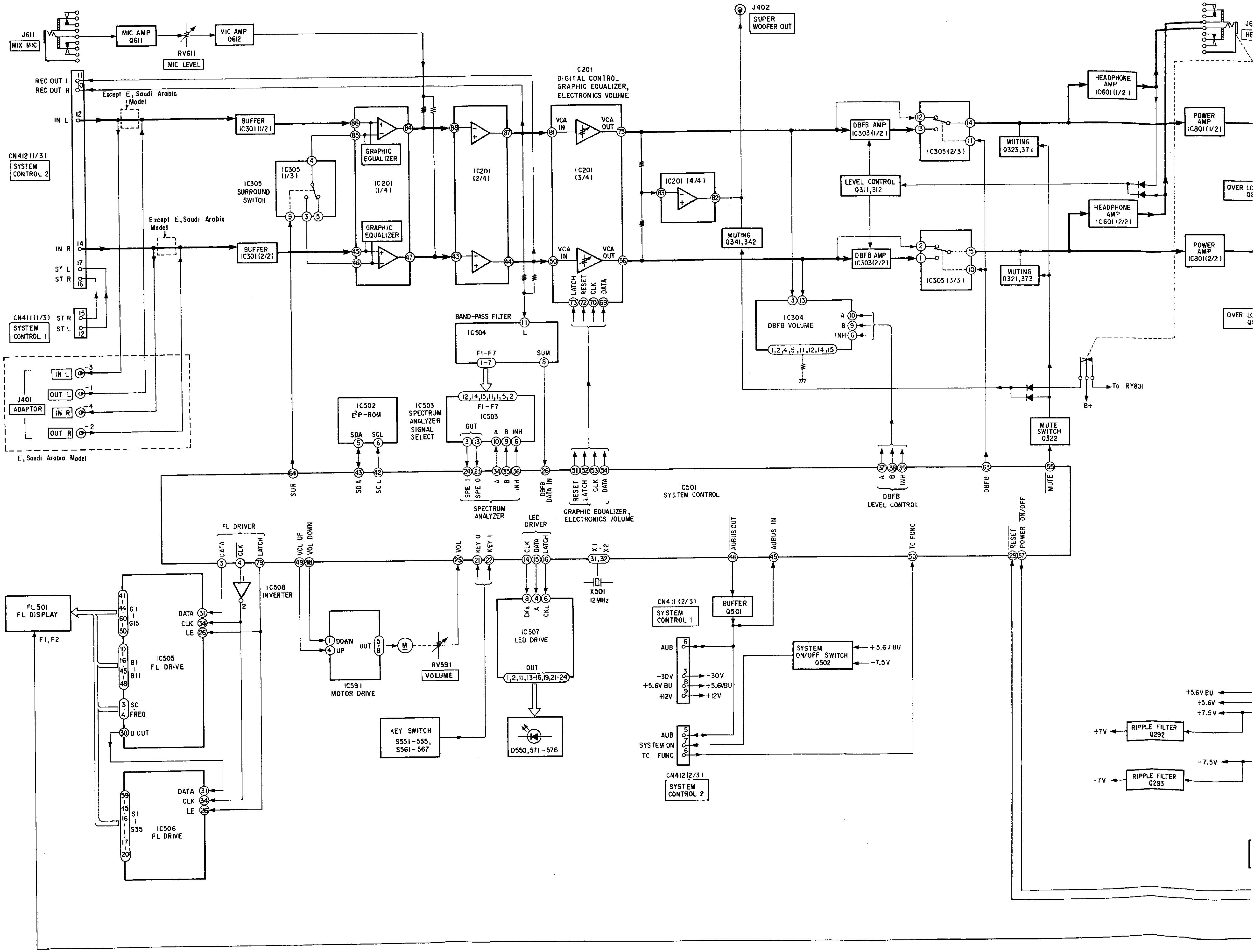
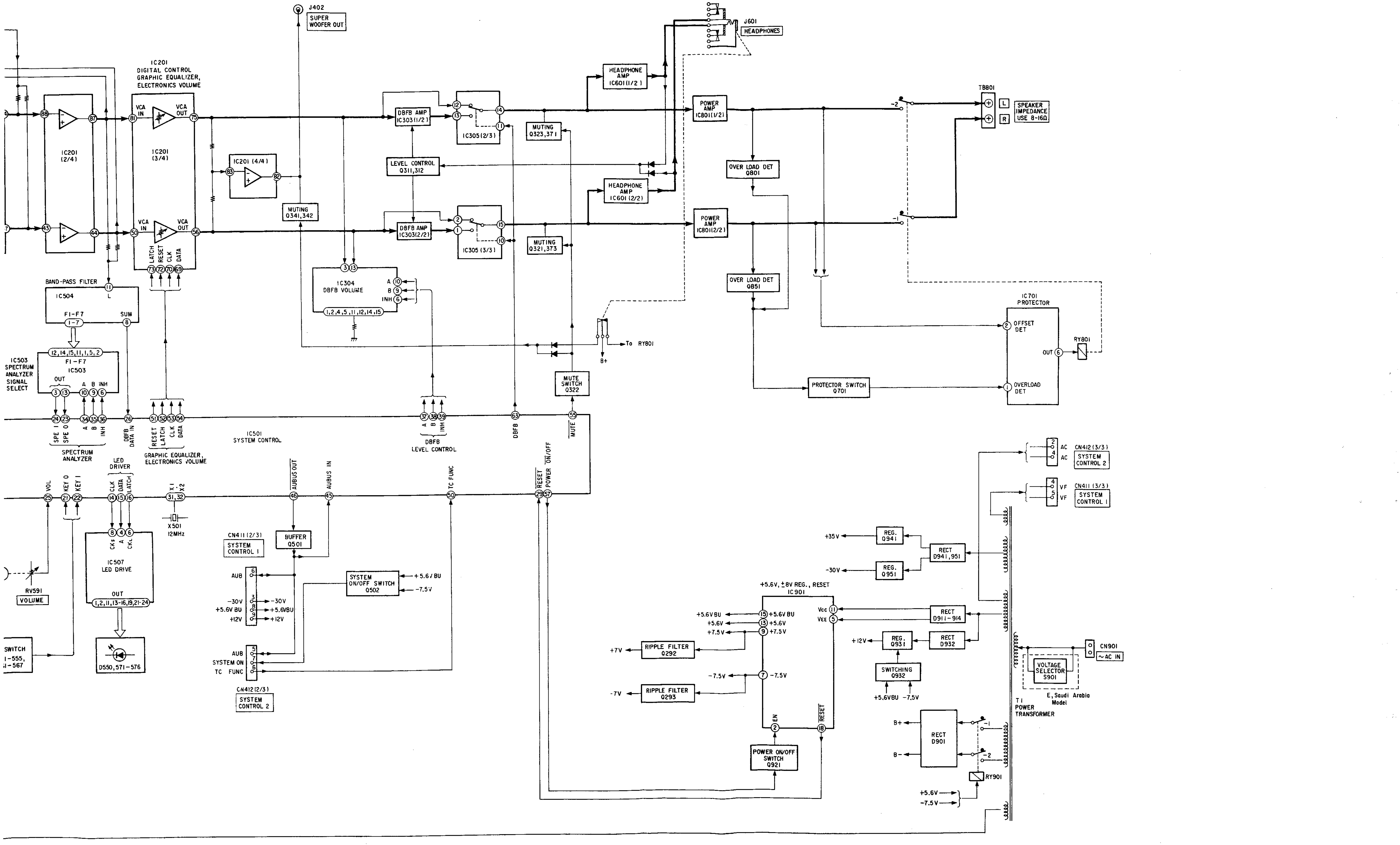
BLOCK DIAGRAM

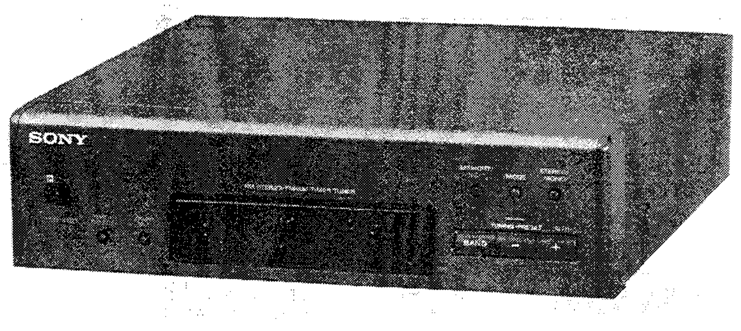

J611
MIX MIC
MIC AMP Q611
RV611
MIC LEVEL
MIC AMP Q612
J402
SUPER WOOFER OUT
REC OUT L
REC OUT R
Except E, Saudi Arabia Model
IN L
CN412 (1/3)
SYSTEM CONTROL 2
BUFFER IC301(1/2)
BUFFER IC301(2/2)
IC305 (1/3)
IC305 SURROUND SWITCH
GRAPHIC EQUALIZER
IC201 (1/4)
IC201 (2/4)
IC201 DIGITAL CONTROL GRAPHIC EQUALIZER, ELECTRONICS VOLUME
VCA IN
VCA OUT
IC201 (3/4)
IC201 (4/4)
MUTING Q341,342
DBFB AMP IC303(1/2)
DBFB AMP IC303(2/2)
LEVEL CONTROL Q311,312
IC305 (2/3)
IC305 (3/3)
MUTING Q323,371
MUTING Q321,373
HEADPHONE AMP IC601(1/2)
HEADPHONE AMP IC601(2/2)
POWER AMP IC801(1/2)
POWER AMP IC801(2/2)
OVER L
IN R
ST L
ST R
CN411(1/3)
SYSTEM CONTROL 1
LATCH
RESET
CLK
DATA
BAND-PASS FILTER
IC504
F1-F7
SUM
IC304 DBFB VOLUME
INH
To RY801
B+
J401 ADAPTOR
IN L
OUT L
IN R
OUT R
E, Saudi Arabia Model
IC502 E²P-ROM
SDA
SCL
IC503 SPECTRUM ANALYZER SIGNAL SELECT
OUT
MUTE SWITCH Q322
SUR
SPE I
SPE O
DBFB DATA IN
SPECTRUM ANALYZER
GRAPHIC EQUALIZER, ELECTRONICS VOLUME
IC501 SYSTEM CONTROL
DBFB LEVEL CONTROL
DBFB
MUTE
RESET
POWER ON/OFF
TC FUNC
AUBUS OUT
AUBUS IN
FL DRIVER
VOL UP
VOL DOWN
VOL
KEY 0
KEY 1
LED DRIVER
X1
X2
IC508 INVERTER
FL501 FL DISPLAY
F1,F2
IC505 FL DRIVE
G1
G15
B1
B11
SC
FREQ
D OUT
DOWN
UP
IC591 MOTOR DRIVE
RV591 VOLUME
CKs
CKL
IC507 LED DRIVE
X501 12MHz
CN411 (2/3)
SYSTEM CONTROL 1
BUFFER Q501
SYSTEM ON/OFF SWITCH Q502
+5.6V BU
-7.5V
AUB
-30V
+5.6V BU
+12V
-30V
+5.6VBU
+12V
SYSTEM ON
TC FUNC
CN412 (2/3)
SYSTEM CONTROL 2
KEY SWITCH S551-555, S561-567
D550,571-576
IC506 FL DRIVE
S1
S35
+5.6V BU
+5.6V
+7.5V
+7V
RIPPLE FILTER Q292
-7.5V
-7V
RIPPLE FILTER Q293


J402
SUPER WOOFER OUT
J601
HEADPHONES
IC201
DIGITAL CONTROL
GRAPHIC EQUALIZER,
ELECTRONICS VOLUME
IC201 (2/4)
IC201 (3/4)
VCA IN
VCA OUT
IC201 (4/4)
LATCH
RESET
CLK
DATA
DBFB AMP IC303(1/2)
DBFB AMP IC303(2/2)
IC305(2/3)
IC305 (3/3)
LEVEL CONTROL Q311,312
MUTING Q341,342
MUTING Q323,371
MUTING Q321,373
HEADPHONE AMP IC601(1/2)
HEADPHONE AMP IC601(2/2)
POWER AMP IC801(1/2)
POWER AMP IC801(2/2)
OVER LOAD DET Q801
OVER LOAD DET Q851
TB801
SPEAKER IMPEDANCE USE 8-16Ω
L
R
IC701
PROTECTOR
OFFSET DET
OVERLOAD DET
OUT
RY801
PROTECTOR SWITCH Q701
To RY801
B+
MUTE SWITCH Q322
BAND-PASS FILTER
IC504
F1-F7
SUM
IC503
SPECTRUM ANALYZER SIGNAL SELECT
F1-F7
OUT
A B INH
IC304
DBFB VOLUME
A
B
INH
SPE 1
SPE 0
A
B
INH
DBFB DATA IN
RESET
LATCH
CLK
DATA
SPECTRUM ANALYZER
GRAPHIC EQUALIZER, ELECTRONICS VOLUME
IC501
SYSTEM CONTROL
A
B
INH
DBFB LEVEL CONTROL
DBFB
MUTE
RESET
POWER ON/OFF
AUBUS OUT
AUBUS IN
TC FUNC
VOL
KEY 0
KEY 1
LED DRIVER
CLK
DATA
LATCH
X1
X2
X501
12MHz
IC507
LED DRIVE
CKs
A
CKL
OUT
D550,571-576
RV591
VOLUME
SWITCH
CN411 (2/3)
SYSTEM CONTROL 1
BUFFER Q501
AUB
-30V
+5.6V BU
+12V
SYSTEM ON/OFF SWITCH Q502
+5.6/BU
-7.5V
AUB
SYSTEM ON
TC FUNC
CN412(2/3)
SYSTEM CONTROL 2
CN412(3/3)
SYSTEM CONTROL 2
AC
CN411 (3/3)
SYSTEM CONTROL 1
VF
+35V
REG. Q941
-30V
REG. Q951
RECT D941,951
+5.6V, ±8V REG., RESET
IC901
+5.6VBU
+5.6V
+7.5V
Vcc
VEE
RECT D911-914
+7V
RIPPLE FILTER Q292
+12V
REG. Q931
RECT D932
SWITCHING Q932
+5.6VBU -7.5V
-7.5V
-7V
RIPPLE FILTER Q293
EN
RESET
POWER ON/OFF SWITCH Q921
CN901
~AC IN
VOLTAGE SELECTOR S901
E, Saudi Arabia Model
T1
POWER TRANSFORMER
B+
B-
RECT D901
RY901
+5.6V
-7.5V

ST-H3600/H6600

SERVICE MANUAL

AEP Model
UK Model



ST-H3600 and ST-H6600 are the tuner section in MHC-2600/3600 and MHC-5600/6600 respectively.

Photo : ST-H6600

SPECIFICATIONS

System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 — 108 MHz
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	For AEP, UK models MW: 531 — 1,602 kHz LW: 153 — 279 kHz For Italian model MW: 522 — 1,611 kHz LW: 144 — 288 kHz
Antenna	AM loop antenna. External antenna terminals
Intermediate frequency	450 kHz

Note :
G : Germany model
IT : Italian model

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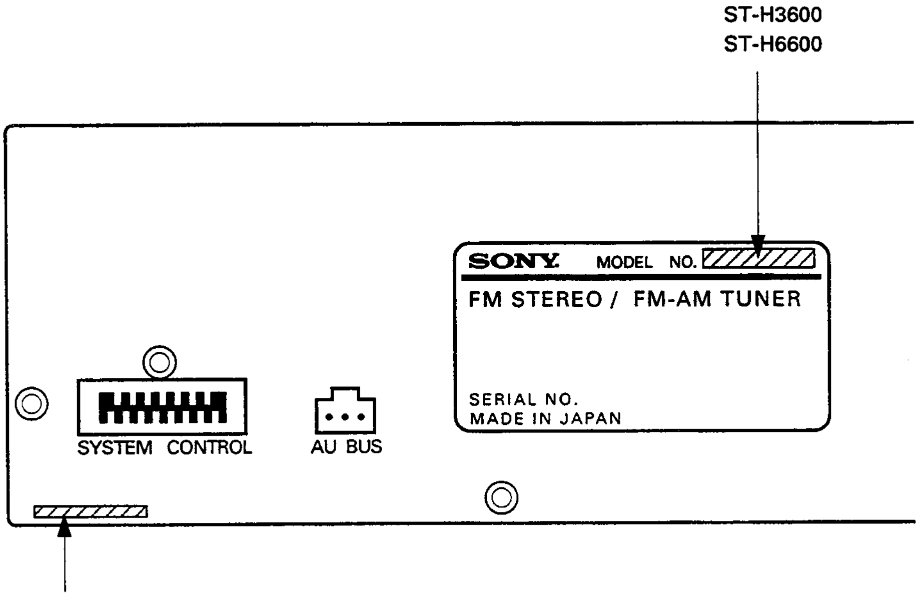
FM STEREO/FM-AM TUNER

SONY®

MODEL IDENTIFICATION

– BACK PANEL –


ST-H3600
ST-H6600
SONY
MODEL NO.
FM STEREO / FM-AM TUNER
SERIAL NO.
MADE IN JAPAN
SYSTEM CONTROL
AU BUS

4-942-893-51. AE ....ST-H3600 AEP,UK model
4-942-893-81. AE4 ....ST-H3600 G model
4-942-893-91. IT ....ST-H3600 IT model

4-942-893-01. AE ....ST-H6600 AEP model
4-942-893-31. AE4 ....ST-H6600 G model
4-942-893-41. IT ....ST-H6600 IT model

SERVICE MODE TO CHECK FL TUBE AND KEY INPUT

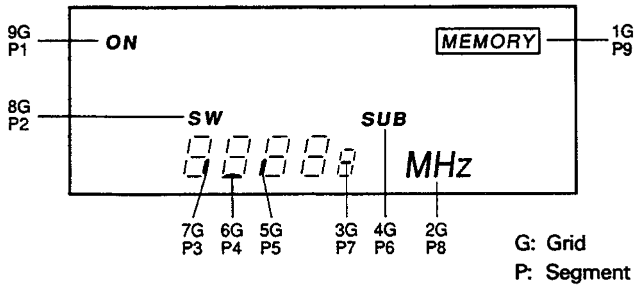
It is possible to check FL tube all ON grid, segment and key input.

(1) Connect the equipment to the amplifier TA-H2600, H3600, H5600 or H6600 and remove the AC cord of the amplifier out of the AC receptacle.

(2) While pressing 3 switches "BAND","-" and "MEMORY/NEXT" at the same time, insert the AC cord of the amplifier into the receptacle.

(3) Thus, all FL display tubes light up. By pressing "+" or "TIMER CONTROL" in this state, partial lighting or key input checking, respectively, is effected.

Partial lighting: Indicates the mode to check complete connection between the grid and segment of the FL tube. The condition is normal when the following indication is effected. By pressing "+" or "-" in the partial lighting mode, the status returns to key input checking or all ON in (3), respectively.



Key input checking: Shows the mode to check key input into 9 keys on the front panel. "0" is indicated at first and, every time a different key is pressed, indicated number is increased. After completion of pressing all 9 keys, "PASS" is indicated. (Once a key is pressed, pressing it again is rejected.)

(4) After the completion of the checking, the equipment recovers normal operation by once removing the AC cord and inserting it again into the AC receptacle.

HOW TO FORCEFULLY TURN POWER ON

The equipment is not provided with any power switch. Therefore, power ON/OFF is controlled in the amplifier side. However, even without an amplifier, power is supplyable to the equipment according to the following methods provided any type of power is available, e.g. using a special jig or supplying the 4 types of voltages individually.

(When power is supplied from the amplifier, power is turned ON only for the tuner.)

(1) Supply power.

(2) Press 3 switches "STEREO/MONO","-" and "MEMORY/NEXT" at the same time.
(Press "STEREO/MONO" and "-" beforehand, and finally press "MEMORY/NEXT.")

However, when the equipment is started up by the methods above, service modes TIMER ON/OFF and FL tube and key input checking are not operable.

SECTION 1

SERVICING NOTES

SUPPLY OF POWER DURING SERVICES

Because the equipment is not provided with any power supply, it is operated with power supplied from the amplifier TA-H2600, H3600, H5600 or H6600 used in the series. The equipment requires the following 4 types of voltages. Therefore, connect the equipment to TA-H2600, H3600, H5600 or H6600 for services such as repairing with power supplied, because it will be too complicated to supply these voltages individually.

VOLTAGE	MAJOR CIRCUIT IN USE
AC 3.9V	FL tube filament voltage (VF)
DC –24V	Display controller IC701 grid voltage (VG)
DC 5.6V	Display controller IC701, Tuner PLL IC81 Vcc
DC 12V	Tuner RF, FM/AM DET IC21 Vcc

SERVICE MODE TO CHECK TIMER ON-OFF

It is possible to check whether the timer normally functions while being connected with an amplifier.

(1) Connect the equipment to the amplifier TA-H2600, H3600, H5600 or H6600 and set the POWER switch to STANDBY state.
(2) Set the time of the tuner to any time.
(3) Press 3 switches "BAND","-" and "MEMORY/NEXT" at the same time (while pressing "BAND" and "-" beforehand, finally press "MEMORY/NEXT")
(4) FL display tube

10 : 21
↓ 0.5 sec
10 : 22
↓ 0.5 sec
10 : 23
↓ 0.5 sec
10 : 24
↓ 0.5 sec
FUNCTION : TUNER → POWER ON
BAND : FM
FREQUENCY : Preset memory 1
↓ 3 sec
00 : 00 → POWER OFF

(5) Completion

Note : After completion of the checking above, data preset in the memory IC702 is erased while resetting the memory to the following state upon shipping from the works, so be sure to recover the same frequency as that before the repairing.

- **Frequencies initially preset**

	AEP/UK model			G/IT model		
	FM	MW	LW	FM	MW	LW
1	87.5MHz	531KHz	153KHz	87.5MHz	522KHz	144KHz
2	88.0MHz	603KHz	162KHz	88.0MHz	603KHz	162KHz
3	98.0MHz	999KHz	216KHz	98.0MHz	999KHz	216KHz
4	100.0MHz	1404KHz	270KHz	100.0MHz	1404KHz	270KHz
5	108.0MHz	1602KHz	279KHz	108.0MHz	1611KHz	288KHz
6 - 20	*1	*2	*2	*1	*2	*2

*1 The same frequency values are set for the preset memory No.6 - No.10, No.11 - No.15 and No.16 - No.20 as for No.1 - No.5 respectively.
*2 The same frequency values are set for the preset menory No.6 -No.10 as for No.1 - No.5.

SECTION 2
GENERAL

This section is extracted from instruction manual.

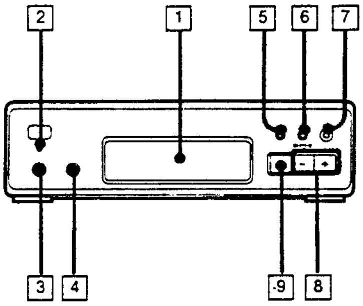
Parts Identification

Refer to the pages indicated in ● for use of the buttons.

Tuner Section A

1 Display window
2 CLOCK SET button ㉔
3 TIMER SELECT button (112)
4 TIMER SET button (112)
5 MEMORY/NEXT button ㉔ (60) (112)
6 MODE button (58) (62)
7 STEREO/MONO (stereo/monaural) button
8 TUNING PRESET/TIMER –/+ buttons
9 BAND selector (58)

A



Clock Setting

Setting the Clock

Example: Set to 9:25 in the morning.

1 **Press CLOCK SET.**

2 **Set the hour with the – or + button.**

3 **Press MEMORY/NEXT.**

4 **Set the minute with the – or + button.**

5 **Press MEMORY/NEXT.**
The clock starts operating.

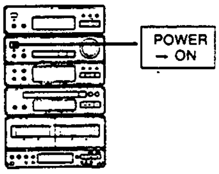
Information on the time

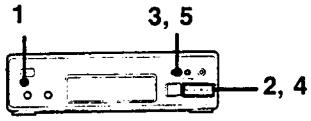
The European and U.K. model shows the time in 24-hour cycle.
The model for other countries shows the time in 12-hour cycle.

AM 12:00 = midnight
PM 12:00 = noon

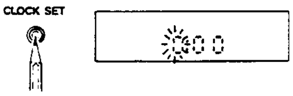
When a power interruption occurs
If the power is recovered within several hours, there is no need to reset the clock, timer, and Wake Up Volume settings. If the power interruption is long, all the above settings are erased, and "0:00" ("AM 12:00") will flash on the display.

To change the frequency display to the time display
Press CLOCK DISP. on the remote commander. Press it again to change to the frequency display.

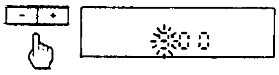




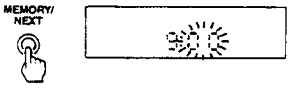
1



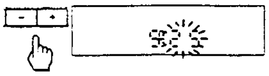
2



3



4



5

MEMORY/
NEXT

Radio

The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

Tuning in Automatically

1 **Press BAND repeatedly until the desired band appears.**
As you press BAND, the band changes as follows:
European and U.K. model:
FM → MW → LW
Model for other countries:
FM → SW → MW

2 **Press MODE so that the TUNING indicator lights up.**

3 **Keep – or + depressed for more than 1 second.**
"AUTO" appears on the display and the unit tunes in a station automatically.

Repeat step 3 until the desired station appears.

Tuning in Manually

1 **Press BAND repeatedly until the desired band appears.**

2 **Press MODE so that the TUNING indicator lights up.**

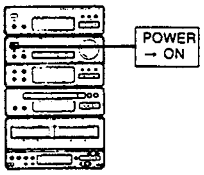
3 **Press – or + repeatedly until the desired station appears.**

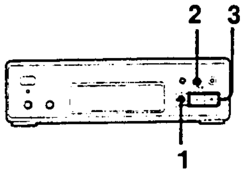
Indicator on the display

TUNED:	Appears when a station of sufficient signal strength is tuned in.
STEREO:	Appears when an FM stereo program of sufficient signal strength is received.

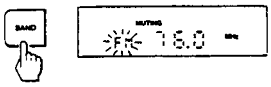
Antenna adjustment A

For MW and LW (SW) reception, find the best location for the supplied AM loop antenna.

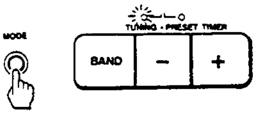




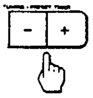
1

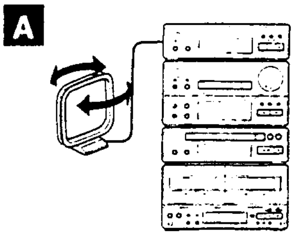


2



3

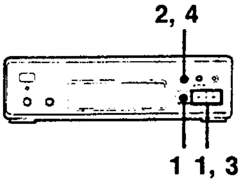




Radio

Storing Stations

You can store up to 20 FM stations and 10 MW stations and 10 LW (SW) stations in a desired sequence, so that you can tune in the stored station directly by entering the preset station number.
This operation is not possible with the remote commander.



1 **Tune in the desired station.**

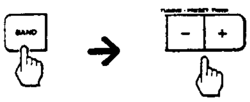
2 **Press MEMORY/NEXT.**
"MEMORY" and the preset station numbers appear on the display.

3 **While "MEMORY" is on (for several seconds), press – or + to select a desired preset number.**

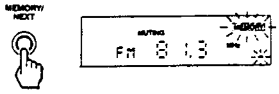
4 **Press MEMORY/NEXT.**
"MEMORY" disappears, and the station is stored.

Repeat step 1 to 4 for each station to be stored.

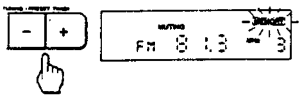
1



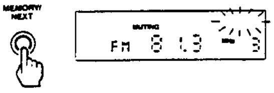
2



3



4



If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on (about 4 seconds).

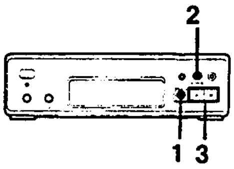
When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with the steps 3 and 4.

To change the preset station
Store a desired station at the desired preset number by proceeding with the above steps.
The station previously preset will be erased.
Erasing only is not possible.

Radio

To Tune in a Preset Station

Notes:
- When you use the remote commander for the following operations make sure that the display of the remote commander shows "TUNER" If not, press TUNER on the remote commander.
- You cannot operate the buttons on the lid if the lid is open.



1 **Press BAND to select a desired band.**

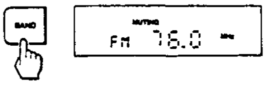
2 **Press MODE so that the PRESET indicator lights up.**

3 **Press – or + (◀ or ▶ on the remote commander) to select the desired preset station number.**

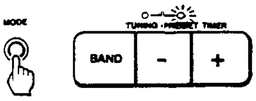
To tune in a preset station directly

Possible only with the remote commander.
1 Press BAND to select a desired band.
2 Press the numeric buttons to select the desired preset station number.

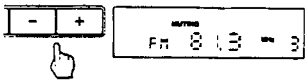
1



2



3



SECTION 3

ELECTRICAL ADJUSTMENTS

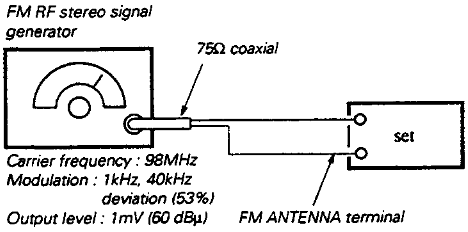
PRECAUTIONS IN REPAIRING

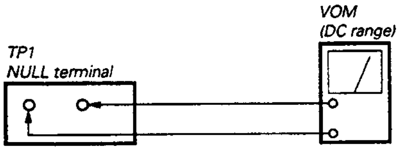
If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

FM SECTION

FM DISCRIMINATOR ALIGNMENT (NULL CHECK)

Setting :


FM RF stereo signal generator
75Ω coaxial
set
Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (53%)
Output level : 1mV (60 dBμ)
FM ANTENNA terminal


VOM (DC range)
TP1 NULL terminal

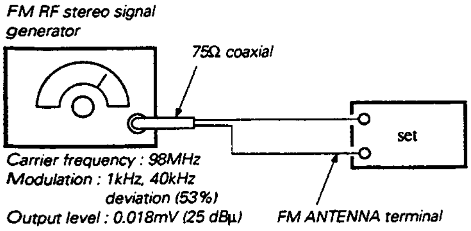
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM TUNING LEVEL adjustment shoud be made after FM discriminator alignment.

FM TUNING LEVEL ADJUSTMENT

Setting :

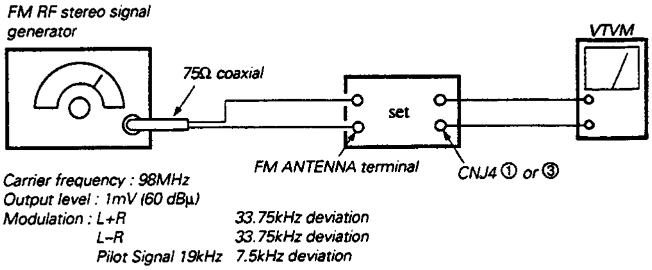

FM RF stereo signal generator
75Ω coaxial
set
Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (53%)
Output level : 0.018mV (25 dBμ)
FM ANTENNA terminal

Procedure :

1. Tune the set to 98MHz.
2. Adjust T24 so that the TUNED LED goes on.

FM STEREO SEPARATION ADJUSTMENT

Setting :


FM RF stereo signal generator
75Ω coaxial
set
VTVM
FM ANTENNA terminal
CNJ4 ① or ③
Carrier frequency : 98MHz
Output level : 1mV (60 dBμ)
Modulation : L+R 33.75kHz deviation
L−R 33.75kHz deviation
Pilot Signal 19kHz 7.5kHz deviation

Procedure :

Tune the set to 98MHz.

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

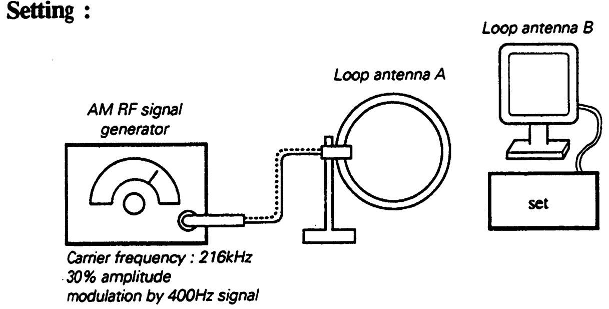
L-CH Stereo separation : Ⓐ – Ⓑ
R-CH Stereo separetion : Ⓒ – Ⓓ

The separations of both channels should be equal.

AM SECTION

AM TUNING LEVEL ADJUSTMENT

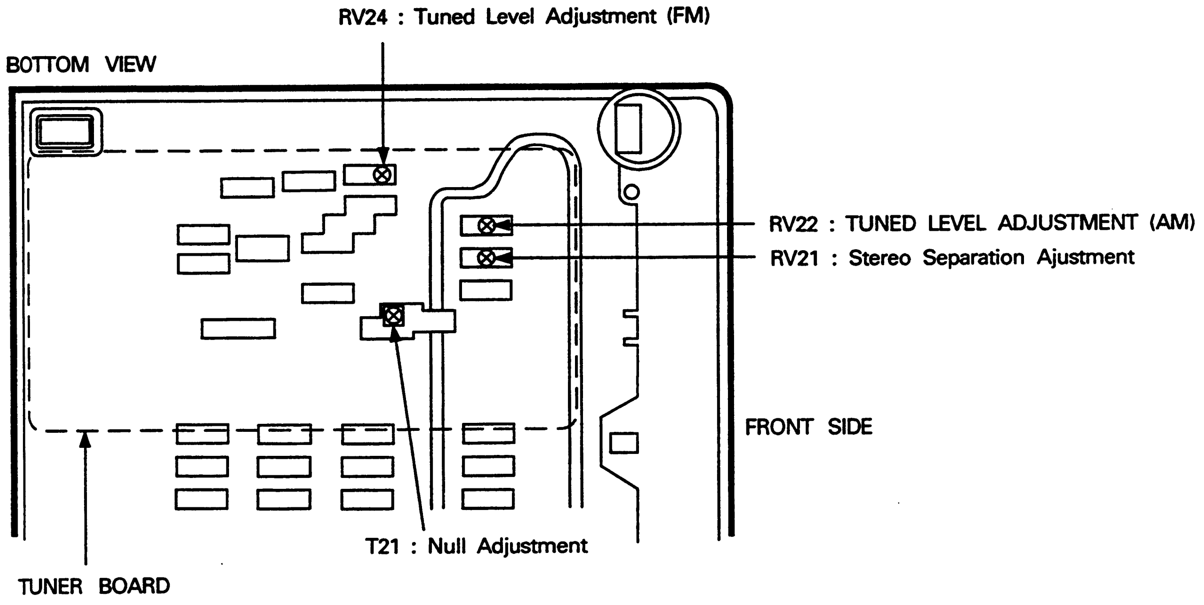
Setting :


Loop antenna B
Loop antenna A
AM RF signal generator
set
Carrier frequency : 216kHz
30% amplitude
modulation by 400Hz signal

Procedure :

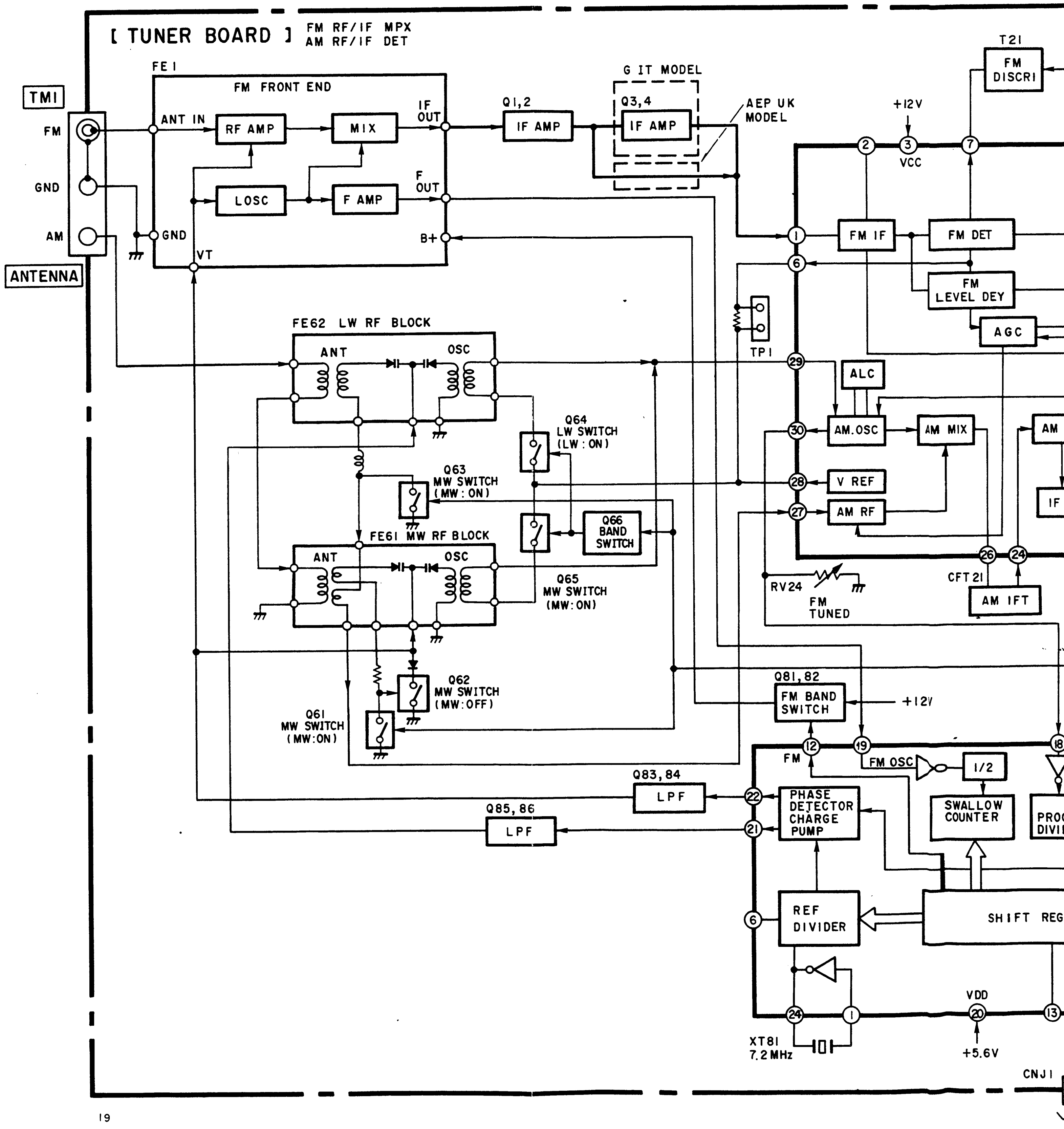
1. Set loop antenna A so that the loop antenna B input level becomes 2.5mV (68dB/m).
2. Tune the set to 216kHz.
3. Adjust the RV22 so that the TUNED LED goes on.

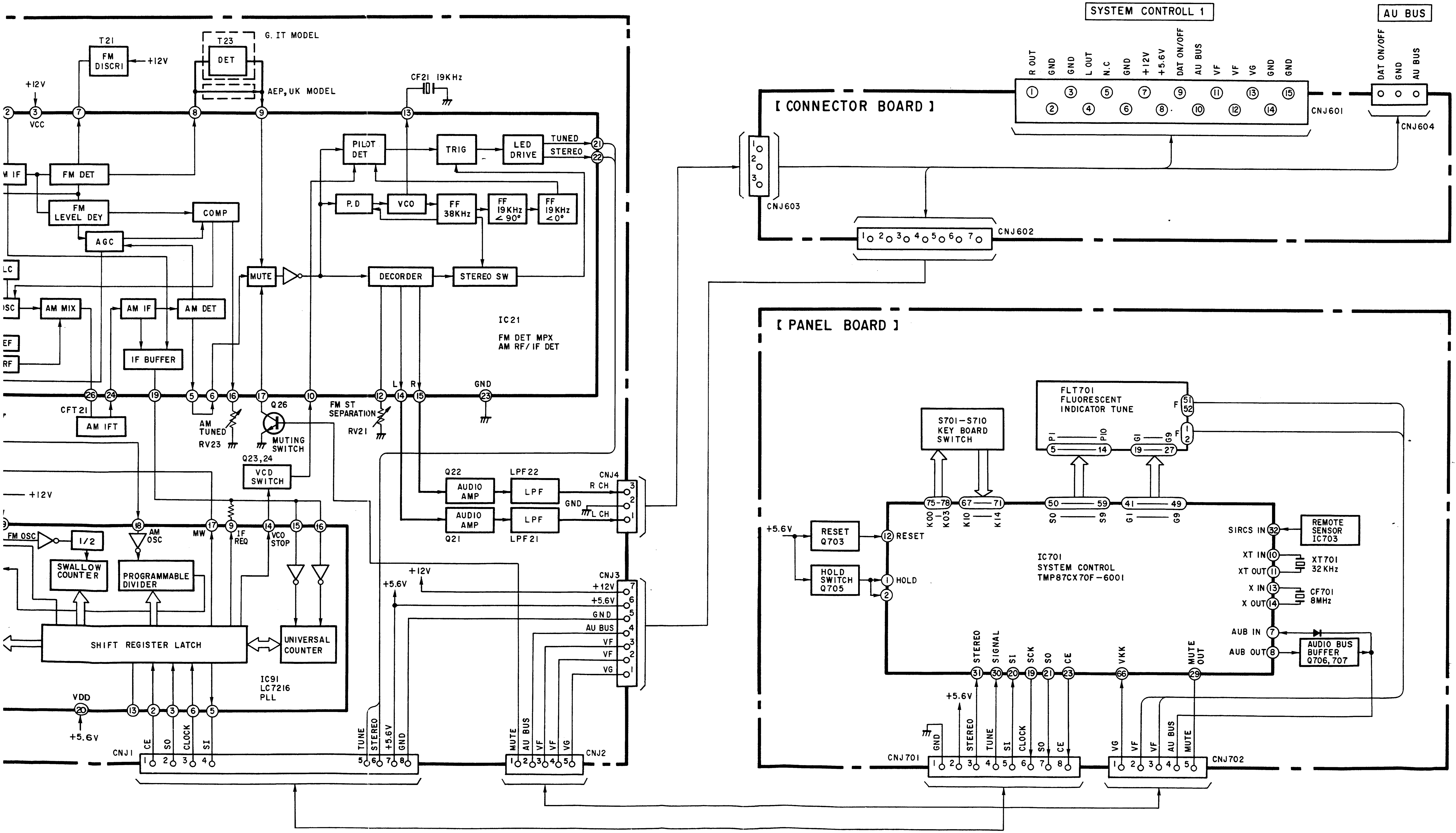
[PARTS ARRANGEMENT DIAGRAM FOR ADJUSTMENT]


RV24 : Tuned Level Adjustment (FM)
BOTTOM VIEW
RV22 : TUNED LEVEL ADJUSTMENT (AM)
RV21 : Stereo Separation Ajustment
FRONT SIDE
T21 : Null Adjustment
TUNER BOARD

SECTION 4
DIAGRAMS

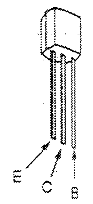
4-1. BLOCK DIAGRAM


[TUNER BOARD] FM RF/IF MPX AM RF/IF DET
TM1
FM
GND
AM
ANTENNA
FE1
FM FRONT END
ANT IN
RF AMP
MIX
IF OUT
LOSC
F AMP
F OUT
GND
VT
B+
Q1,2
IF AMP
G IT MODEL
Q3,4
IF AMP
AEP UK MODEL
+12V
VCC
T21
FM DISCRI
FM IF
FM DET
FM LEVEL DEY
AGC
TP1
FE62 LW RF BLOCK
ANT
OSC
Q64 LW SWITCH (LW : ON)
Q63 MW SWITCH (MW : ON)
Q66 BAND SWITCH
FE61 MW RF BLOCK
ANT
OSC
Q65 MW SWITCH (MW:ON)
Q62 MW SWITCH (MW:OFF)
Q61 MW SWITCH (MW:ON)
ALC
AM.OSC
AM MIX
AM
V REF
AM RF
IF
RV24
FM TUNED
CFT21
AM IFT
Q81,82
FM BAND SWITCH
+12V
FM
FM OSC
1/2
Q83,84
LPF
Q85,86
LPF
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER
PROG DIVI
REF DIVIDER
SHIFT REG
VDD
XT81 7.2MHz
+5.6V
CNJ1
19

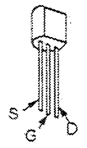

T21
FM DISCRI
+12V
T23
DET
G. IT MODEL
AEP, UK MODEL
CF21 19KHz
VCC
FM DET
FM LEVEL DEY
COMP
AGC
PILOT DET
TRIG
LED DRIVE
TUNED
STEREO
P.D
VCO
FF 38KHz
FF 19KHz ∠90°
FF 19KHz ∠0°
MUTE
DECORDER
STEREO SW
AM MIX
AM IF
AM DET
IF BUFFER
IC21
FM DET MPX
AM RF/IF DET
GND
L
R
CFT21
AM IFT
AM TUNED
RV23
Q26
MUTING SWITCH
FM ST SEPARATION
RV21
Q23,24
VCD SWITCH
Q22
AUDIO AMP
LPF22
LPF
Q21
LPF21
CNJ4
R CH
L CH
FM OSC
1/2
SWALLOW COUNTER
AM OSC
PROGRAMMABLE DIVIDER
MW
IF REQ
VCO STOP
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IC91
LC7216
PLL
VDD
+5.6V
CNJ1
CE
SO
CLOCK
SI
TUNE
STEREO
+5.6V
GND
CNJ3
+12V
+5.6V
GND
AU BUS
VF
VF
VG
CNJ2
MUTE
AU BUS
VF
VF
VG
-11-
[CONNECTOR BOARD]
SYSTEM CONTROLL 1
R OUT
GND
GND
L OUT
N.C
GND
+12V
+5.6V
DAT ON/OFF
AU BUS
VF
VF
VG
GND
GND
CNJ601
AU BUS
DAT ON/OFF
GND
AU BUS
CNJ604
CNJ603
CNJ602
[PANEL BOARD]
FLT701
FLUORESCENT INDICATOR TUNE
S701-S710
KEY BOARD SWITCH
P1 — P10
G1 — G9
75-78
67—71
50—59
41—49
K00 — K03
K10 — K14
S0 — S9
G1 — G9
+5.6V
RESET Q703
RESET
HOLD SWITCH Q705
HOLD
IC701
SYSTEM CONTROL
TMP87CX70F-6001
SIRCS IN
REMOTE SENSOR IC703
XT IN
XT OUT
XT701 32KHz
X IN
X OUT
CF701 8MHz
AUB IN
AUB OUT
AUDIO BUS BUFFER Q706,707
STEREO
SIGNAL
SI
SCK
SO
CE
VKK
MUTE OUT
CNJ701
GND
STEREO
TUNE
SI
CLOCK
SO
CE
CNJ702
VG
VF
VF
AU BUS
MUTE

4-2. SEMICONDUCTOR LEAD LAYOUTS

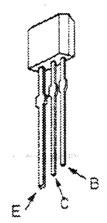
DTA114ES
DTC114ES
2SC2603-EF
2SC2669-OY
2SC3113-AB



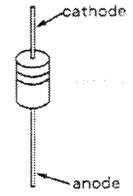
2SK246-GR3



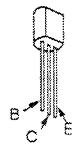
2SA1175-HFE
2SC2785-HFE



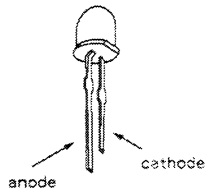
UZ-4.3BSA
1SS120


cathode
anode

2SA1317-SU
2SC3330-T



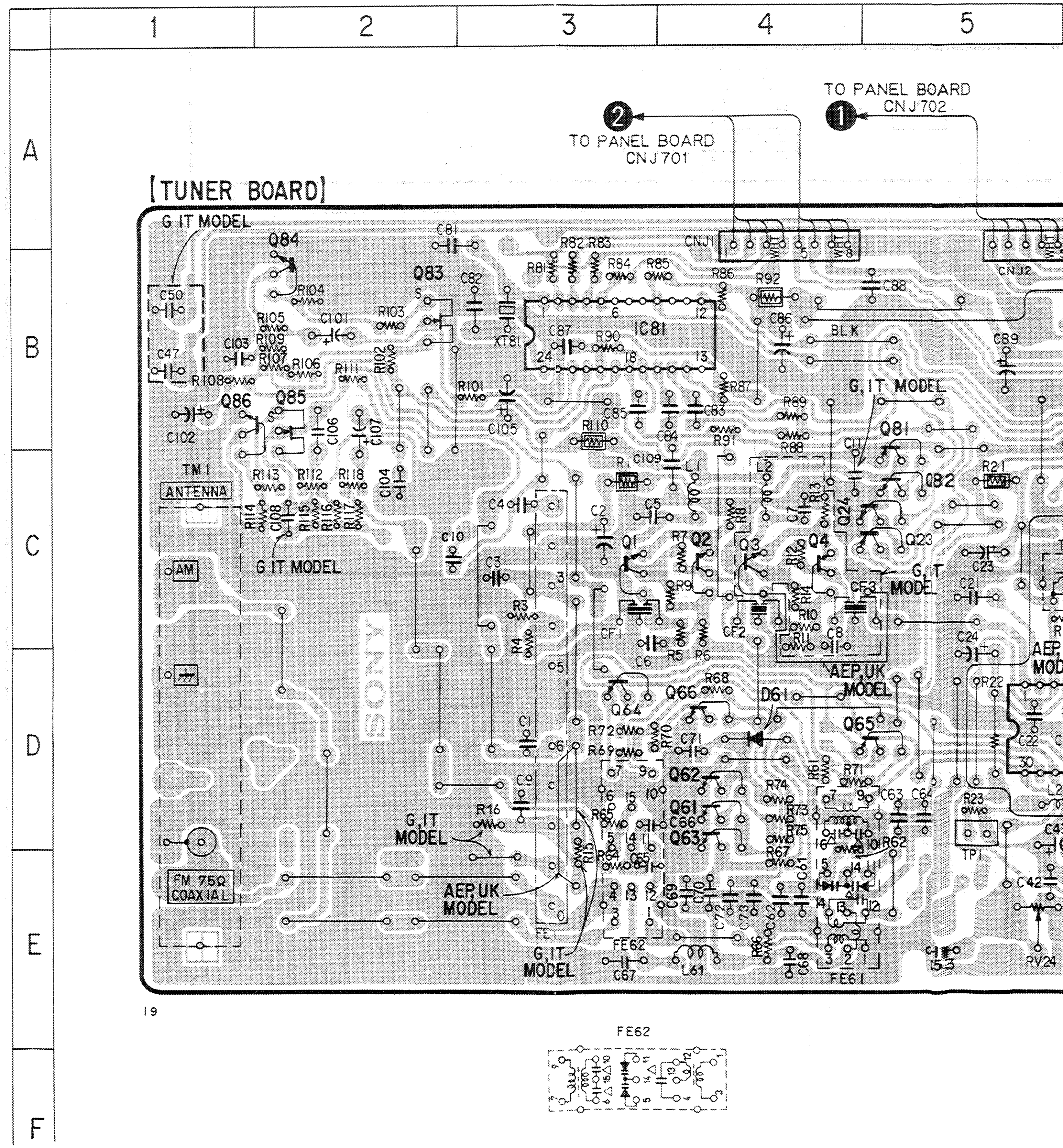
SEL2210S-D

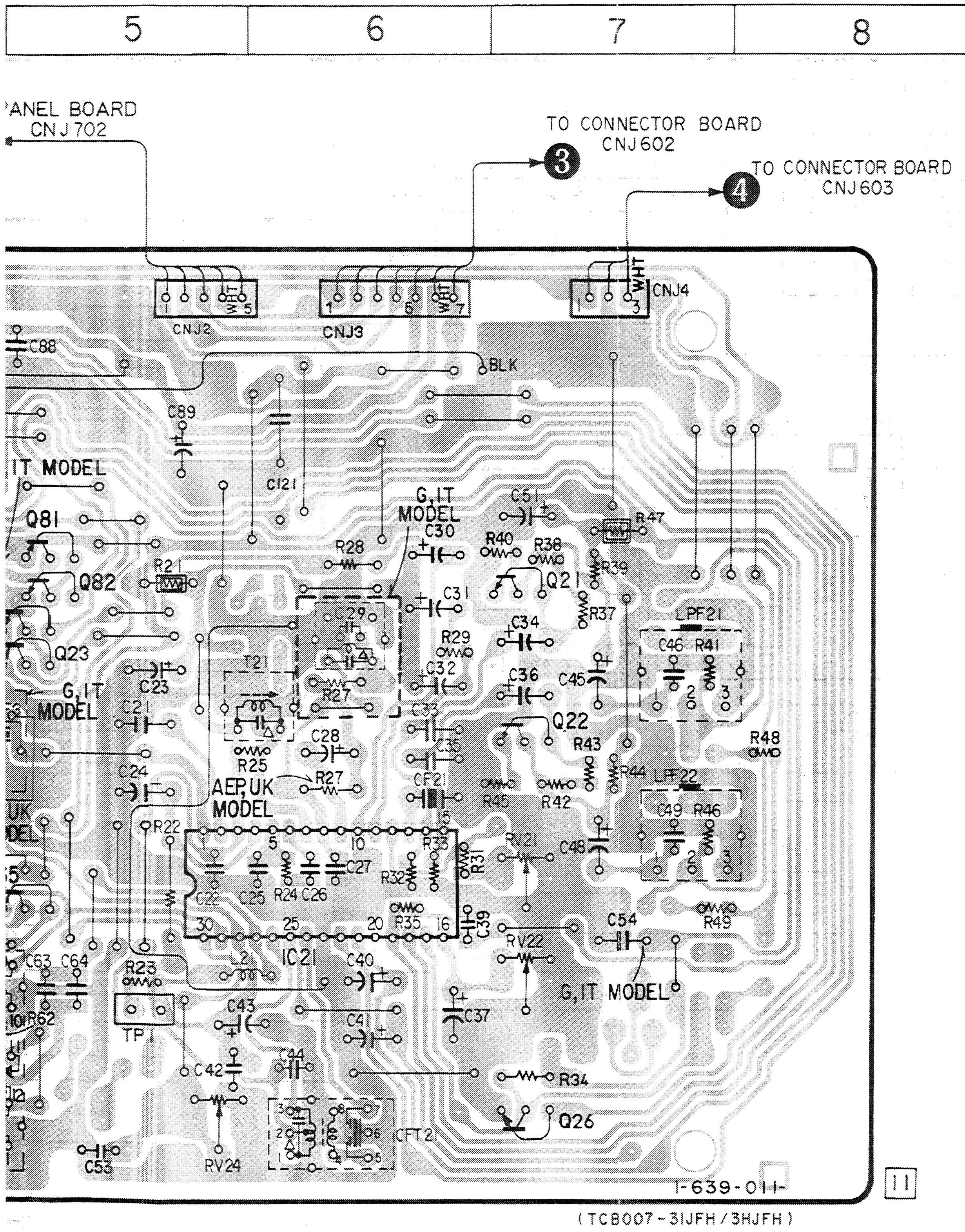

anode
cathode

● SEMICONDUCTOR LOCATION

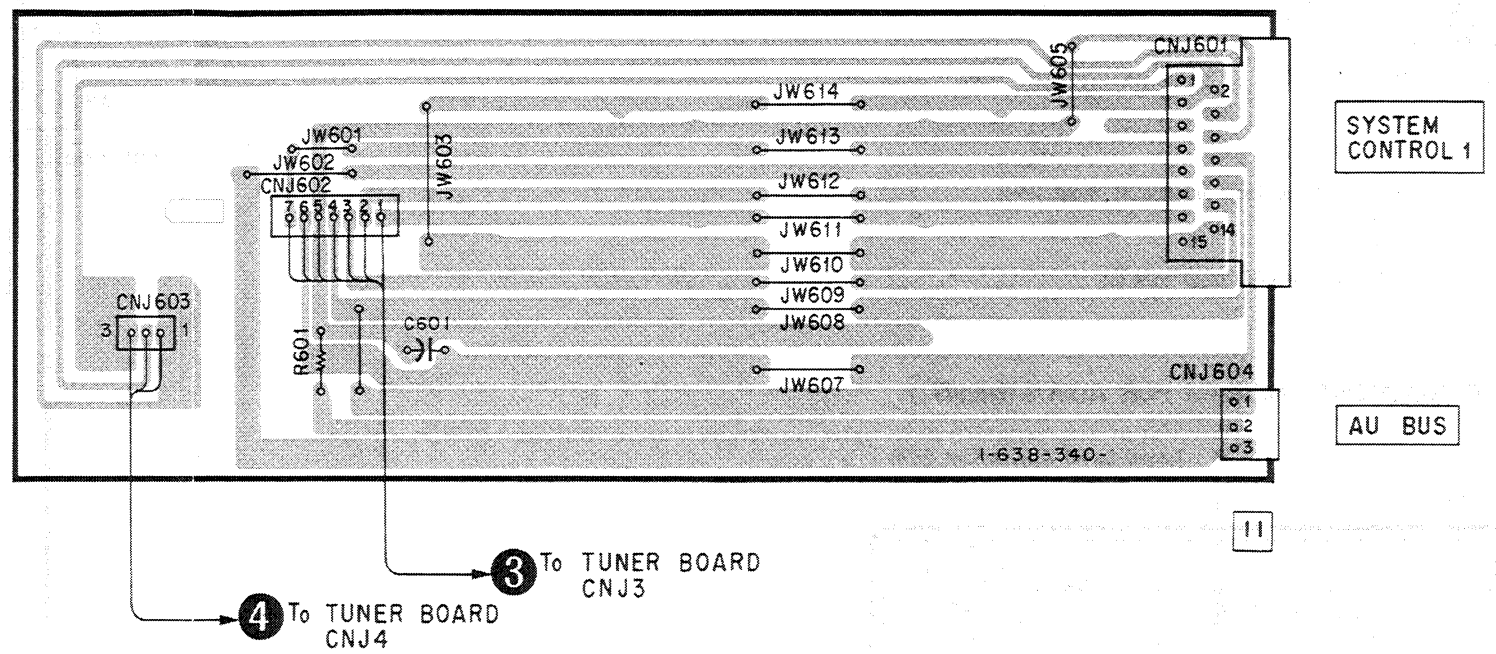
Ref. No	Location	
	H3600	H6600
D61	D – 4	D – 4
D701	G – 4	B – 5
D702	G – 4	B – 2
D707	H – 4	B – 3
D710	G – 2	B – 2
D711	G – 3	B – 3
D712	G – 7	A – 9
D714	G – 9	B – 5
D715	G – 10	B – 9
D716	G – 9	B – 9
D717	G – 8	A – 9
D718	G – 8	B – 2
IC21	C – 5	C – 5
IC81	C – 5	C – 5
IC701	G – 6	B – 6
IC702	G – 9	B – 9
IC703	G – 7	B – 9
Q1	C – 3	C – 3
Q2	C – 4	C – 4
Q3	C – 4	C – 4
Q4	C – 4	C – 4
Q21	C – 7	C – 7
Q22	C – 7	C – 7
Q23	C – 4	C – 4
Q24	C – 4	C – 4
Q26	E – 7	E – 7
Q61	D – 4	D – 4
Q62	D – 4	D – 4
Q63	D – 4	D – 4
Q64	D – 3	D – 3
Q65	D – 5	D – 5
Q66	D – 4	D – 4
Q81	C – 5	C – 5
Q82	C – 5	C – 5
Q701	G – 3	A – 2
Q702	F – 3	A – 2
Q703	G – 8	B – 8
Q705	H – 9	B – 8
Q706	G – 8	B – 9
Q707	G – 9	B – 9

4-3. PRINTED WIRING BOARD – TUNER SECTION –


1
2
3
4
5
A
B
C
D
E
F
TO PANEL BOARD
CNJ702
TO PANEL BOARD
CNJ701
[TUNER BOARD]
G IT MODEL
Q84
Q83
C81
C82
R82 R83
R84
R85
CNJ1
CNJ2
R86
R92
C88
C50
C47
R104
R105
R109
R107
C101
C103
R106
R111
R102
R103
XT81
C87
R90
IC81
C86
BLK
C89
R108
R101
R87
G, IT MODEL
Q86
Q85
C102
C106
C107
C105
C85
C83
C84
R89
R88
R110
R91
Q81
Q82
R21
TM1
ANTENNA
R113
R112
R118
C104
R1
C109
L1
L2
R114
C108
R115
R116
R117
G IT MODEL
C4
C2
C5
C7
R13
Q24
Q23
C23
AM
C10
C3
Q1
R7
Q2
Q3
Q4
R12
CF3
G, IT MODEL
C21
SONY
R3
R9
R8
R14
R10
R11
C8
C24
CF1
CF2
R4
C6
R5
R6
AEP, UK MODEL
Q64
Q66
R68
D61
Q65
R22
C1
R72
R70
R69
C71
Q62
R74
R61
R71
C63
C64
G, IT MODEL
R16
Q61
Q63
C66
R73
R75
R62
R23
TP1
R65
R64
C65
R67
FM 75Ω COAXIAL
AEP, UK MODEL
C69
C70
C72
C73
C62
C61
C42
G, IT MODEL
FE62
C67
L61
R66
C68
FE61
L53
RV24
19
FE62


5
6
7
8
9
10
11
12
13
PANEL BOARD CNJ702
TO CONNECTOR BOARD CNJ602
TO CONNECTOR BOARD CNJ603
CNJ2
CNJ3
CNJ4
WHT
BLK
G,IT MODEL
AEP,UK MODEL
IC21
T21
LPF21
LPF22
CF21
CFT21
Q81
Q82
Q21
Q22
Q23
Q26
RV21
RV22
RV24
TP1
1-639-011-
11
(TCB007-31JFH/3HJFH)

【CONNECTOR BOARD】


CNJ601
CNJ602
CNJ603
CNJ604
JW601
JW602
JW603
JW605
JW607
JW608
JW609
JW610
JW611
JW612
JW613
JW614
R601
C601
SYSTEM CONTROL 1
AU BUS
1-638-340-
11
To TUNER BOARD CNJ3
To TUNER BOARD CNJ4

Note for schematic diagram:

- ○—— : indicated a lead wire mounted on the component side.
- ⌐┘ : indicates side identified with part number.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : internal component.
- ▭ : nonflammable resistor

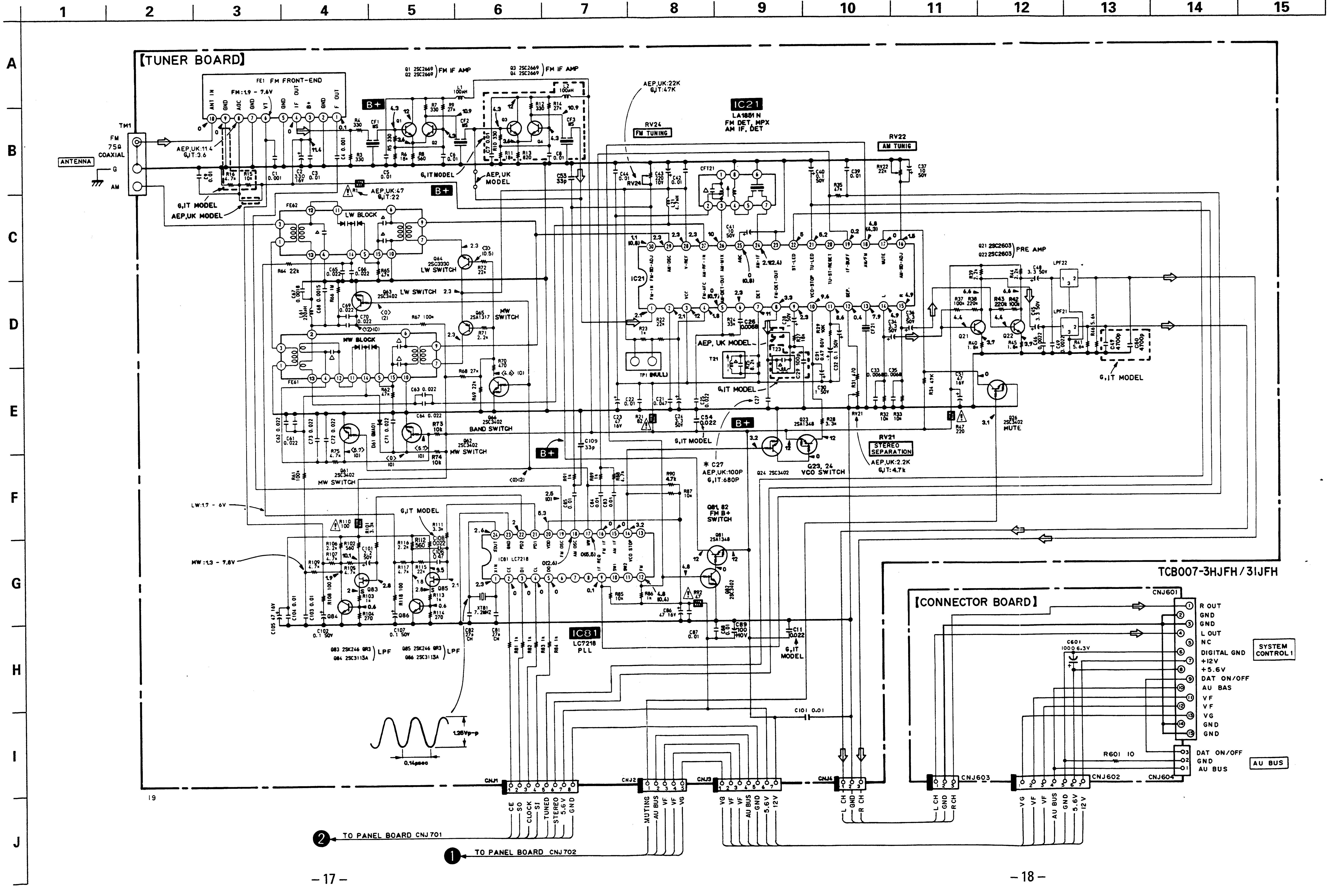
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no -signal (detuned) conditions.

no mark : FM
( ) : MW
< > : LW

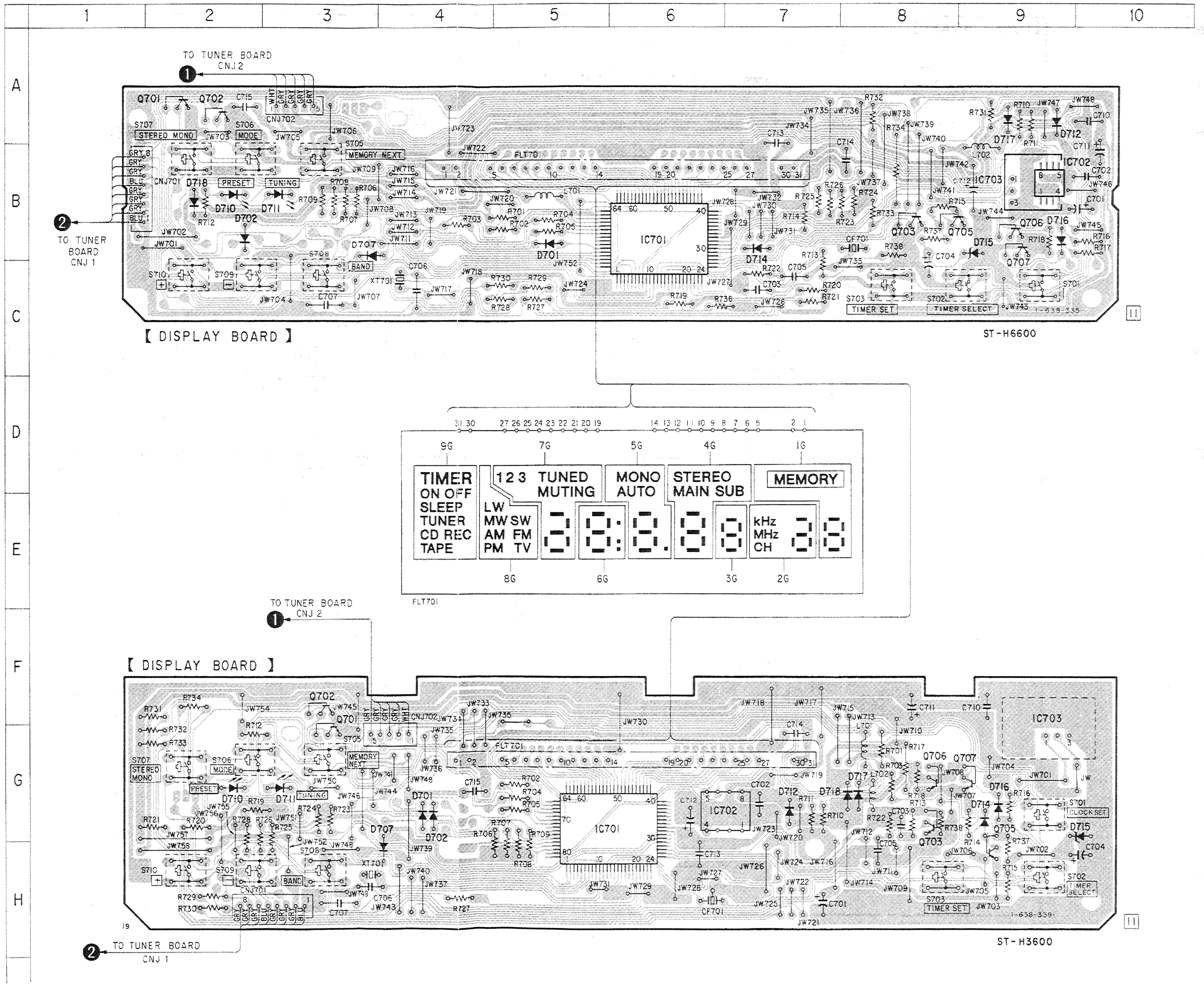
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path
  ⇨ : FM
- G : Germany Model
- IT : Itarian Model

4-4. SCHEMATIC DIAGRAM – TUNER SECTION –


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J
【TUNER BOARD】
FE1 FM FRONT-END
FM:1.9 - 7.6V
ANT IN
GND
AGC
VT
IF
B+
OUT
F OUT
TM1
FM 75Ω COAXIAL
ANTENNA
G
AM
AEP,UK:11.4
G,IT:3.6
G,IT MODEL
AEP,UK MODEL
AEP,UK:47
G,IT:22
B+
Q1 2SC2669
Q2 2SC2669
FM IF AMP
Q3 2SC2669
Q4 2SC2669
FM IF AMP
CF1
CF2
CF3
L1 100μH
L2 100μH
G,IT MODEL
AEP,UK MODEL
C53 33p
FE62
LW BLOCK
Q64 2SC3330 LW SWITCH
Q63 2SC3402 LW SWITCH
Q65 2SA1317 MW SWITCH
MW BLOCK
FE61
Q66 2SC3402 BAND SWITCH
Q62 2SC3402 MW SWITCH
Q61 2SC3402 MW SWITCH
D61 MA101
AEP,UK:22K
G,IT:47K
RV24
FM TUNING
IC21
LA1851N
FM DET, MPX
AM IF, DET
RV22
AM TUNIG
CFT21
IC21
TP1 (NULL)
T21
T23
AEP, UK MODEL
G,IT MODEL
Q23 2SA1348
Q24 2SC3402
G23, 24 VCO SWITCH
* C27
AEP,UK:100P
G,IT:680P
RV21
STEREO SEPARATION
AEP,UK:2.2K
G,IT:4.7k
Q21 2SC2603
Q22 2SC2603
PRE AMP
LPF22
LPF21
G,IT MODEL
Q26 2SC3402 MUTE
C109 33p
LW:1.7 - 6V
MW:1.3 - 7.8V
G,IT MODEL
Q83 2SK246 GR3
Q84 2SC3113A
LPF
Q85 2SK246 GR3
Q86 2SC3113A
LPF
IC81 LC7218
IC81
LC7218
PLL
X781 7.2MHZ
Q81, 82
FM B+
SWITCH
Q81 2SA1348
Q82 2SC3402
C101 0.01
1.26Vp-p
0.14μsec
TCB007-3HJFH/31JFH
【CONNECTOR BOARD】
CNJ601
R OUT
GND
GND
L OUT
NC
DIGITAL GND
+12V
+5.6V
DAT ON/OFF
AU BAS
VF
VF
VG
GND
GND
SYSTEM CONTROL 1
C601 1000 6.3V
R601 10
DAT ON/OFF
GND
AU BUS
AU BUS
CNJ1
CNJ2
CNJ3
CNJ4
CNJ603
CNJ602
CNJ604
CE
SO
CLOCK
SI
TUNED
STEREO
5.6V
GND
MUTING
AU BUS
VF
VF
VG
VG
VF
VF
AU BUS
GND
5.6V
12V
L CH
GND
R CH
L CH
GND
R CH
VG
VF
VF
AU BUS
GND
5.6V
12V
19
② TO PANEL BOARD CNJ 701
❶ TO PANEL BOARD CNJ702

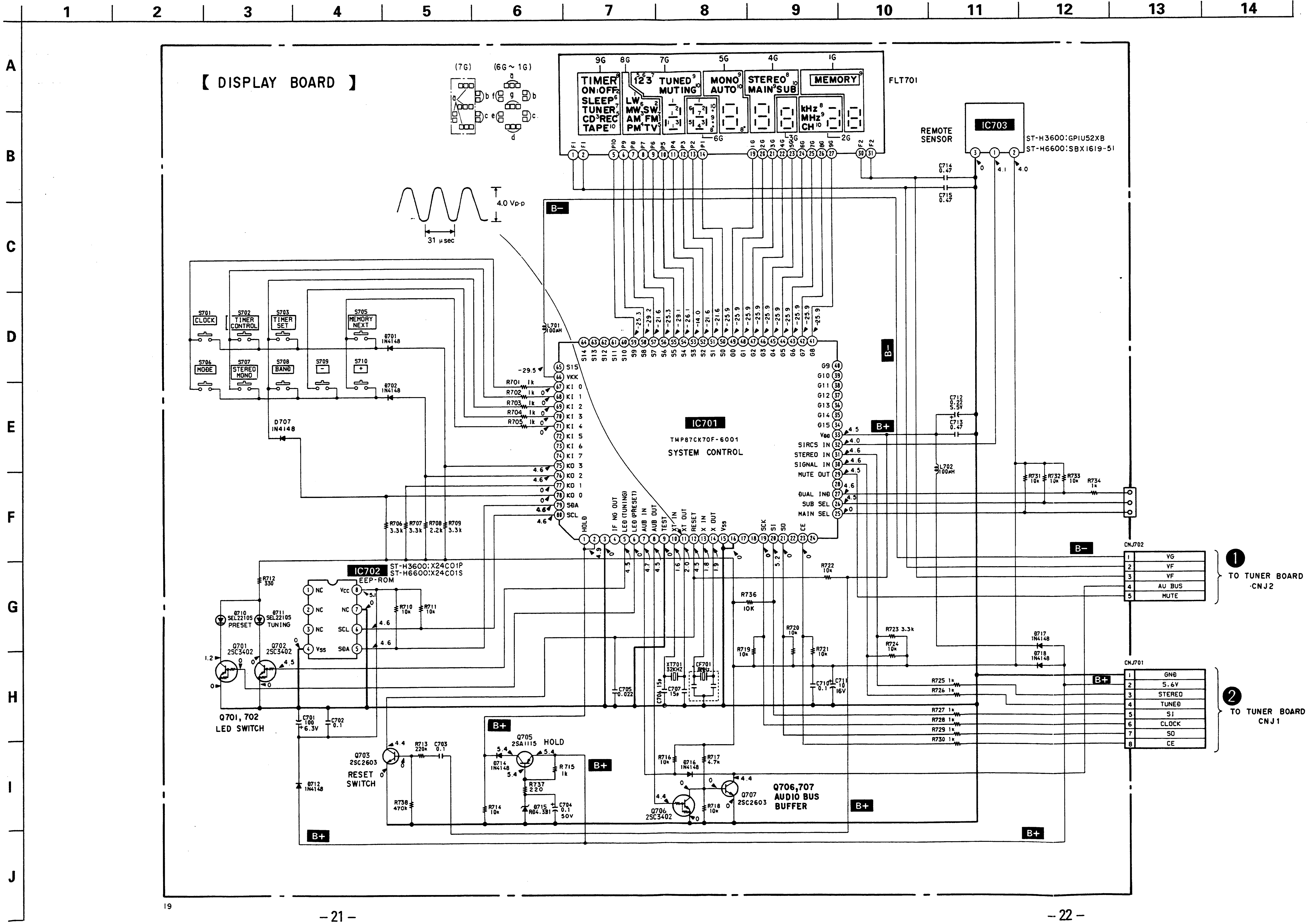
4-5. PRINTED WIRING BOARD – DISPLAY SECTION –

• See page 13 for semiconductor Location.


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
TO TUNER BOARD CNJ 2
TO TUNER BOARD CNJ 1
【 DISPLAY BOARD 】
ST-H6600
ST-H3600
IC701
IC702
IC703
FLT701
CNJ701
CNJ702
S701
S702 TIMER SELECT
S703 TIMER SET
S705 MEMORY NEXT
S706 MODE
S707 STEREO MONO
S708 BAND
S709 –
S710 +
PRESET
TUNING
CLOCK SET
XT701
CF701
31 30 27 26 25 24 23 22 21 20 19 14 13 12 11 10 9 8 7 6 5 2 1
9G
7G
5G
4G
1G
8G
6G
3G
2G
TIMER
ON OFF
SLEEP
TUNER
CD REC
TAPE
LW
MW SW
AM FM
PM TV
1 2 3
TUNED
MUTING
MONO
AUTO
STEREO
MAIN SUB
MEMORY
kHz
MHz
CH
1-638-335-
1-638-339-

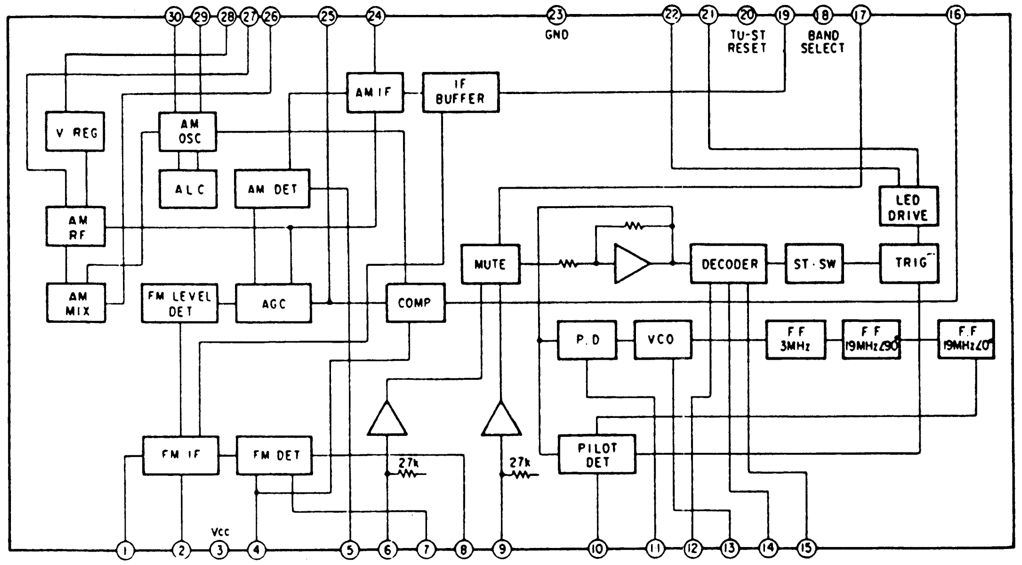
4-6. SCHEMATIC DIAGRAM – DISPLAY SECTION –

• See page 16 for note.

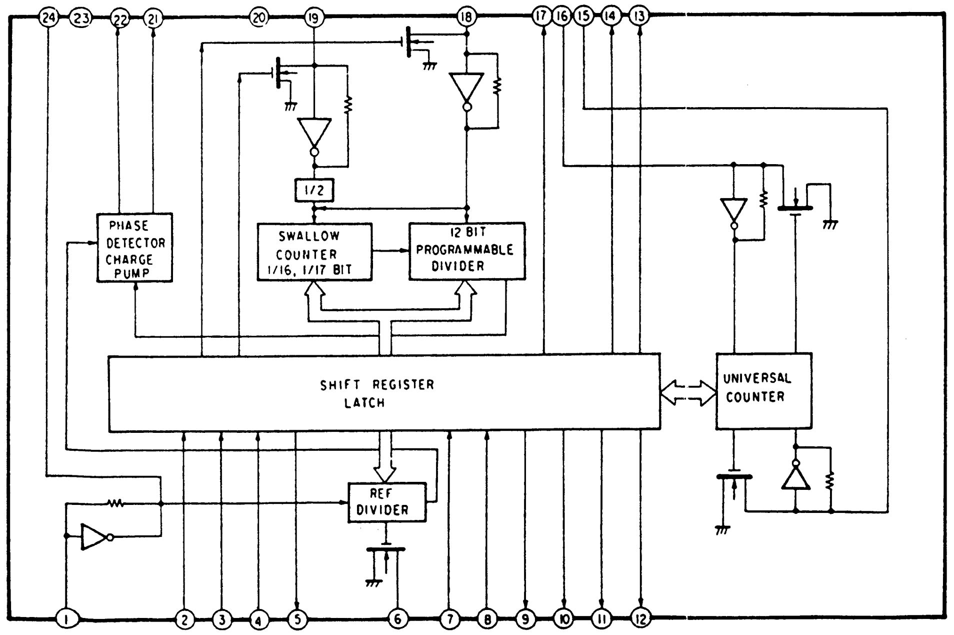

【 DISPLAY BOARD 】
FLT701
IC701
TMP87CK70F-6001
SYSTEM CONTROL
IC702
ST-H3600:X24C01P
ST-H6600:X24C01S
EEP-ROM
IC703
ST-H3600:GP1U52XB
ST-H6600:SBX1619-51
REMOTE SENSOR
4.0 Vp-p
31 μsec
S701 CLOCK
S702 TIMER CONTROL
S703 TIMER SET
S705 MEMORY NEXT
S706 MODE
S707 STEREO MONO
S708 BAND
S709 −
S710 +
Q701, 702 LED SWITCH
D710 SEL22105 PRESET
D711 SEL22105 TUNING
Q703 2SC2603 RESET SWITCH
Q705 2SA1115 HOLD
Q706,707 AUDIO BUS BUFFER
Q706 2SC3402
Q707 2SC2603
XT701 32KHZ
CF701
CNJ702
VG
VF
VF
AU BUS
MUTE
❶ TO TUNER BOARD CNJ2
CNJ701
GND
5.6V
STEREO
TUNED
SI
CLOCK
SO
CE
❷ TO TUNER BOARD CNJ1
B+
B−
TIMER ON OFF SLEEP TUNER CD REC TAPE
123 TUNED MUTING
LW MW SW AM FM PM TV
MONO AUTO
STEREO MAIN SUB
MEMORY
kHz MHz CH
HOLD
IF NG OUT
LED (TUNING)
LED (PRESET)
AUB IN
AUB OUT
TEST
XT IN
XT OUT
RESET
X IN
X OUT
Vss
SCK
SI
SO
CE
SIRCS IN
STEREO IN
SIGNAL IN
MUTE OUT
DUAL IN
SUB SEL
MAIN SEL
1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J

4-7. IC BLOCK DIAGRAMS

IC21 LA1851N


GND
TU-ST RESET
BAND SELECT
V REG
AM OSC
ALC
AM DET
AM IF
IF BUFFER
LED DRIVE
AM RF
MUTE
DECODER
ST·SW
TRIG
AM MIX
FM LEVEL DET
AGC
COMP
P.D
VCO
FF 3MHz
FF 19MHz∠90°
FF 19MHz∠0°
FM IF
FM DET
27k
27k
PILOT DET
Vcc
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

IC81 LC7218


24
23
22
21
20
19
18
17
16
15
14
13
1/2
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16, 1/17 BIT
12 BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
REF DIVIDER
1
2
3
4
5
6
7
8
9
10
11
12

4-8. PIN FUNCTION OF IC701 SYSTEM CONTROLLER (TMP87CK70F-6001)

The terminals work to control tuner section (IC21, 81), FL tube display and reading and writing of IC702 (preset data), etc. according to key input and signal from the remote controller.

PIN No.	PIN NAME	I/O	ACTIVE	PIN FUNCTION
1	HOLD	I	↓	HOLD detecting interrupt terminal
2	HOLD RESET	I	↑	HOLD resetting interrupt terminal
3		I		Not in use
4	IF NGOUT	O	H	IF count NG output
5	LED1	O	H	TUNING LED ON
6	LED2	O	H	PRESET LED ON
7	AUB IN	I	L	AUDIO BUS input
8	AUB OUT	O	L	AUDIO BUS output
9	TEST	I	H	Test terminal
10	XT IN	I		Low frequency oscillator connection terminal (32KHz)
11	XT OUT	O		Low frequency oscillator connection terminal (32KHz)
12	RESET	I	L	Reset signal input
13	X IN	I		High frequency oscillator connection terminal (8MHz)
14	X OUT	O		High frequency oscillator connection terminal (8MHz)
15	VSS			GND
16		I		Not in use
17, 18		O		Not in use
19	SCK	O		PLL serial clock output
20	SI	I		PLL serial data input
21	SO	O		PLL serial data output
22				Not in use
23	CE	O	H	PLL chip enable
24				Not in use
25	MAIN SEL	O	L	Main sound selection terminal (Not in use)
26	SUB SEL	O	L	Sub sound selection terminal (Not in use)
27	DUAL IND	I	L	Sound dual signal detection terminal (Not in use)
28				Not in use
29	MUTE OUT	O	L	MUTING output
30	SIGNAL IN	I	L	TUNED input
31	STEREO IN	I	L	STEREO input
32	SIRCS IN	I	L	SIRCS input
33	VDD			+5V
34 - 40		O		Not in use
41 - 49	G0 - G8	O	H	FL tube digit output
50 - 59	S0 - S9	O	H	FL tube segment output
60 - 65		O	H	Not in use
66	VKK			FL tube driving power supply
67 - 71	KI0 - KI4	I	H	Key input
72		I		Not in use
73, 74				Not in use
75 - 78	KO0 - KO3	O	H	Key output
79	SDA	I/O		Data input/output for EEPROM
80	SCL	O		Clock output for EEPROM

SECTION 5

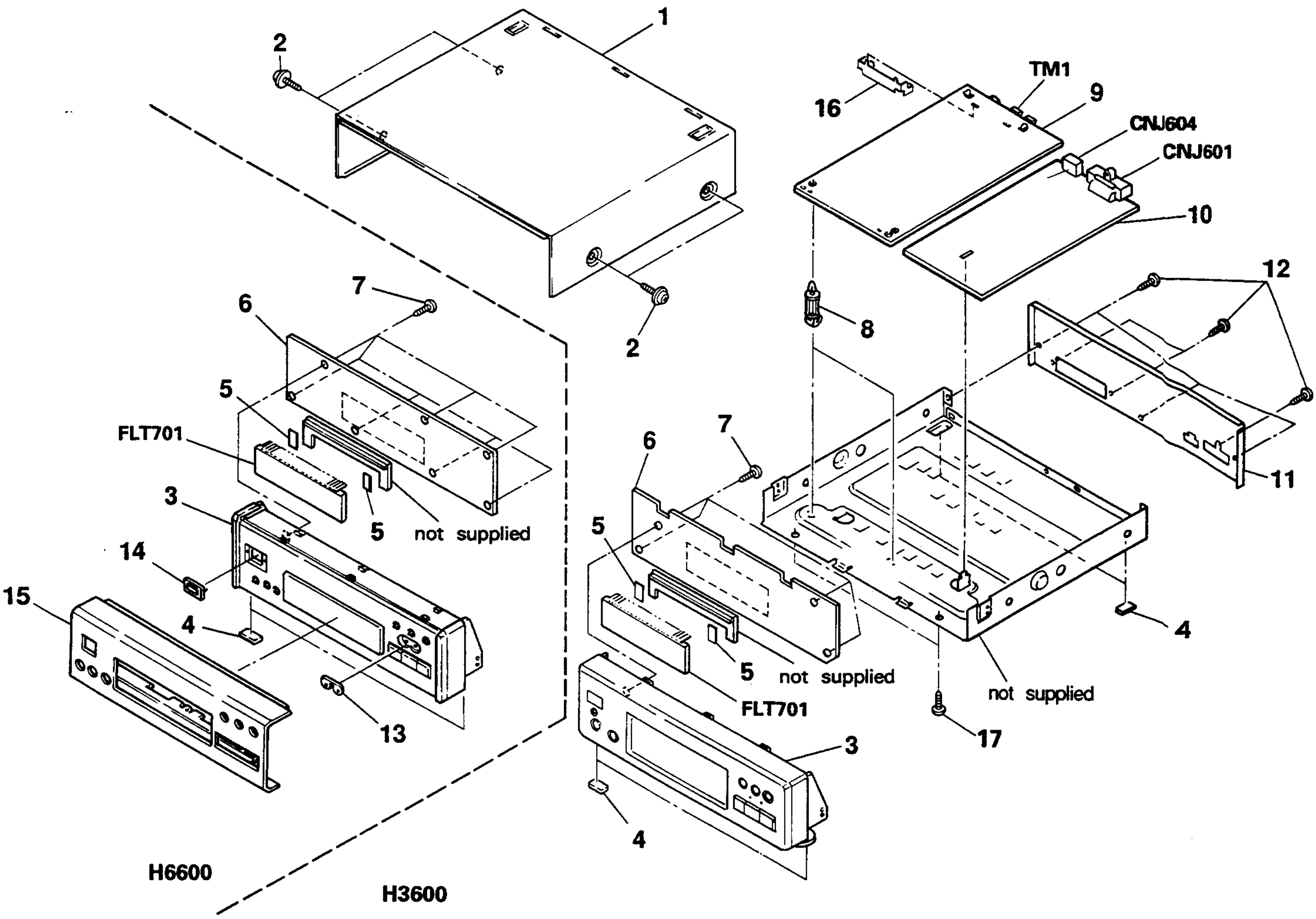
EXPLODED VIEW

NOTE:

- –XX, –X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
1	4-944-423-11	CASE (K206522) (H3600)	
	4-932-844-01	CASE (H6600)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4941-544-1	PANEL ASSY, ASSY (H3600)	
	X-4942-523-1	PANEL ASSY, ASSY (H6600)	
4	4-930-336-01	FOOT (FELT)	
5	* 4-932-810-11	CUSHION (FL)	
6	* A-4341-562-A	DISPLAY BOARD, COMPLETE (H3600: AEP, UK)	
	* A-4341-563-A	DISPLAY BOARD, COMPLETE (H3600: G, IT)	
	* A-4341-554-A	DISPLAY BOARD, COMPLETE (H6600: AEP, UK)	
	* A-4341-556-A	DISPLAY BOARD, COMPLETE (H6600: G, IT)	
7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
8	* 4-914-008-01	HOLDER, PCB	
9	A-4303-367-A	TUNER BOARD(TCB007-3HJFH), COMPLETE(AEP, UK)	
	A-4303-368-A	TUNER BOARD(TCB007-31JFH), COMPLETE(G, IT)	
10	1-638-340-11	CONNECTOR BOARD (H3600)	
	1-638-336-11	CONNECTOR BOARD (H6600)	
11	* 4-942-893-51	PANEL, BACK (H3600: AEP, UK)	
	* 4-942-893-81	PANEL, BACK (H3600: G)	
	* 4-942-893-91	PANEL, BACK (H3600: IT)	
	* 4-942-893-01	PANEL, BACK (H6600: AEP, UK)	
	* 4-942-893-31	PANEL, BACK (H6600: G)	
	* 4-942-893-41	PANEL, BACK (H6600: IT)	
12	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
13	4-944-427-01	INDICATOR (H6600)	
14	4-944-425-01	FILTER (H6600)	
15	4-944-429-11	PANEL (ST), FRONT (H6600)	
16	* 4-924-988-11	PLATE (ST), GROUND	
17	7-682-547-09	SCREW +BVTT 3X6(S) (H6600)	

TUNER

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description	Remarks
	A-4303-367-A	TUNER BOARD(TCB007-3HJFH), COMPLETE(AEP, UK)	
	A-4303-368-A	TUNER BOARD(TCB007-3IJFH), COMPLETE(G, IT)	
		***************************************	
*	4-924-988-11	PLATE (ST), GROUND	
		(CAPACITOR)	
C1	1-162-294-11	CERAMIC CHIP 0.001uF 20% 25V	
C2	1-124-477-11	ELECT 330uF 20% 16V	
C3	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C4	1-162-294-31	CERAMIC CHIP 0.001uF 20% 25V	
C5	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C6	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C7	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	(G, IT)
C8	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	(G, IT)
C9	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C11	1-101-005-00	CERAMIC 0.022uF 50V	(G, IT)
C21	1-101-006-00	CERAMIC 0.047uF 50V	
C22	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C23	1-124-477-11	ELECT 47uF 20% 25V	
C24	1-123-382-00	ELECT 3.3uF 20% 100V	
C25	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C26	1-163-019-00	CERAMIC CHIP 0.0068uF 20% 12V	
C27	1-162-516-11	CERAMIC CHIP 100pF 10% 50V	(AEP, UK)
C27	1-163-007-11	CERAMIC CHIP 680pF 20% 50V	(G, IT)
C28	1-124-903-11	ELECT 1.0uF 20% 50V	
C29	1-162-516-11	CERAMIC CHIP 100pF 10% 50V	(G, IT)
C30	1-124-903-11	ELECT 1.0uF 20% 50V	
C31	1-124-902-00	ELECT 0.47uF 20% 50V	
C32	1-124-463-00	ELECT 0.1uF 20% 50V	
C33	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C34	1-123-382-00	ELECT 3.3uF 20% 100V	
C35	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C36	1-123-382-00	ELECT 3.3uF 20% 100V	
C37	1-124-907-11	ELECT 10uF 20% 50V	
C39	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C40	1-124-463-00	ELECT 0.1uF 20% 50V	
C41	1-124-907-11	ELECT 10uF 20% 50V	
C42	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C43	1-126-176-11	ELECT 220uF 20% 10V	
C44	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C45	1-123-382-00	ELECT 3.3uF 20% 100V	
C46	1-161-375-00	CERAMIC CHIP 0.0022uF 20% 25V	
C47	1-163-170-00	CERAMIC CHIP 0.0047uF 20% 25V	(G, IT)
C48	1-123-382-00	ELECT 3.3uF 20% 100V	
C49	1-161-375-00	CERAMIC CHIP 0.0022uF 20% 25V	
C50	1-163-170-00	CERAMIC CHIP 0.0047uF 20% 25V	(G, IT)
C51	1-124-477-11	ELECT 47uF 20% 25V	
C53	1-163-105-00	CERAMIC CHIP 33pF 5% 50V	
C54	1-101-005-00	CERAMIC 0.022uF 50V	(G, IT)
C61	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C62	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C63	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C64	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C65	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C66	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C67	1-102-120-00	CERAMIC 0.0018uF 10% 50V	
C68	1-163-111-11	CERAMIC CHIP 0.0015uF 20% 25V	
C69	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C70	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C71	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C72	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C73	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C81	1-102-961-00	CERAMIC 27pF 5% 50V	
C82	1-102-961-00	CERAMIC 27pF 5% 50V	
C83	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C84	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	

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Ref. No.	Part No.	Description	Remarks
C85	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C86	1-124-477-11	ELECT 47uF 20% 25V	
C87	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C88	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C89	1-124-443-00	ELECT 100uF 20% 10V	
C101	1-124-925-11	ELECT 2.2uF 20% 100V	
C102	1-124-463-00	ELECT 0.1uF 20% 50V	
C103	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C104	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C105	1-124-477-11	ELECT 47uF 20% 25V	
C106	1-136-173-00	FILM 0.47uF 5% 50V	
C107	1-124-463-00	ELECT 0.1uF 20% 50V	
C108	1-163-063-00	CERAMIC MELF 0.022uF 25V	(G, IT)
C109	1-162-211-31	CERAMIC 33pF 5% 50V	
C121	1-161-379-00	CERAMIC 0.01uF 30% 16V	(G, IT)
		(FILTER)	
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-567-389-11	FILTER, CERAMIC	
CF3	1-567-389-11	FILTER, CERAMIC	(G, IT)
		(OSCILLATOR)	
CF21	1-577-075-11	OSCILLATOR, CERAMIC (19KHz)	
		(IF TRANSFORMER)	
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	
		(CONNECTOR)	
CNJ1	* 1-564-342-11	SOCKET, CONNECTOR 8P	
CNJ2	* 1-564-339-00	PIN, CONNECTOR 5P	
CNJ3	* 1-564-341-11	PIN, CONNECTOR 7P	
CNJ4	* 1-564-337-00	PIN, CONNECTOR 3P	
		(DIODE)	
D61	8-719-912-20	DIODE ISS120	
		(FM FRONT END)	
FE1	1-463-857-11	FRONT END, FM	(G, IT)
FE1	1-463-862-21	FRONT END, FM	(AEP, UK)
		(ENCAPSULATED COMPONENT)	
FE61	1-236-462-11	ENCAPSULATED COMPONENT (MW RF)	
FE62	1-236-463-11	ENCAPSULATED COMPONENT (LW RF)	
		(IC)	
IC21	8-759-821-45	IC LA1851N	
IC81	8-759-820-91	IC LC7218	

Ref. No.	Part No.	Description	Remarks
		(INDUCTOR)	
L1	1-410-645-31	MICRO INDUCTOR 100uH	
L2	1-410-645-31	MICRO INDUCTOR 100uH	(G, IT)
L21	1-407-500-00	MICRO INDUCTOR 4.7mH	
L61	1-410-525-11	MICRO INDUCTOR 220uH	
		(LOW PASS FILTER)	
LPF21	1-235-164-00	FILTER, LOW PASS	
LPF22	1-235-164-00	FILTER, LOW PASS	
		(TRANSISTOR)	
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q3	8-129-230-99	TRANSISTOR 2SC2669-OY	(G, IT)
Q4	8-129-230-99	TRANSISTOR 2SC2669-OY	(G, IT)
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q23	8-729-900-61	TRANSISTOR DTA114ES	
Q24	8-729-900-80	TRANSISTOR DTC114ES	
Q26	8-729-900-80	TRANSISTOR DTC114ES	
Q61	8-729-900-80	TRANSISTOR DTC114ES	
Q62	8-729-900-80	TRANSISTOR DTC114ES	
Q63	8-729-900-80	TRANSISTOR DTC114ES	
Q64	8-729-820-24	TRANSISTOR 2SC3330-T	
Q65	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q66	8-729-900-80	TRANSISTOR DTC114ES	
Q81	8-729-900-61	TRANSISTOR DTA114ES	
Q82	8-729-900-80	TRANSISTOR DTC114ES	
Q83	8-729-202-67	TRANSISTOR 2SK246GR3	
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB	
Q85	8-729-202-67	TRANSISTOR 2SK246GR3	
Q86	8-729-230-93	TRANSISTOR 2SC3113-AB	
		(RESISTOR)	
R1	⚠ 1-249-397-11	CARBON (SMALL) 22 5% 1/4W F	(G, IT)
R1	⚠ 1-249-401-11	CARBON (SMALL) 47 5% 1/4W F	(AEP, UK)
R3	1-249-329-11	CARBON MELF 330 5% 1/8W	
R4	1-249-329-11	CARBON MELF 330 5% 1/8W	
R5	1-249-329-11	CARBON MELF 330 5% 1/8W	
R6	1-249-350-11	CARBON MELF 18K 5% 1/8W	
R7	1-249-329-11	CARBON MELF 330 5% 1/8W	
R8	1-249-332-11	CARBON MELF 560 5% 1/8W	
R9	1-249-352-11	CARBON MELF 27K 5% 1/8W	
R10	1-249-329-11	CARBON MELF 330 5% 1/8W	(G, IT)
R11	1-249-350-11	CARBON MELF 18K 5% 1/8W	(G, IT)
R12	1-249-329-11	CARBON MELF 330 5% 1/8W	(G, IT)
R13	1-249-334-11	CARBON MELF 820 5% 1/8W	(G, IT)
R14	1-249-352-11	CARBON MELF 27K 5% 1/8W	(G, IT)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

TUNER CONNECTOR DISPLAY

Ref. No.	Part No.	Description	Remarks
R15	1-249-374-11	CARBON MELF 10K 5% 1/8W	(G, IT)
R16	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	(G, IT)
R21	⚠ 1-249-404-00	CARBON (SMALL) 82 5% 1/4W	F
R22	1-249-433-11	CARBON (SMALL) 22K 5% 1/4W	
R23	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R24	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R25	1-249-346-11	CARBON MELF 8.2K 5% 1/8W	
R27	1-249-432-11	CARBON (SMALL) 18K 5% 1/4W	
R28	1-249-423-11	CARBON (SMALL) 3.3K 5% 1/4W	
R29	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R31	1-249-331-11	CARBON MELF 470 5% 1/8W	
R32	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R33	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R34	1-249-437-11	CARBON (SMALL) 47K 5% 1/4W	
R35	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R37	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R38	1-249-363-11	CARBON MELF 220K 5% 1/8W	
R39	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R40	1-249-338-11	CARBON MELF 1.8K 5% 1/8W	
R41	1-249-344-11	CARBON MELF 5.6K 5% 1/8W	
R42	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R43	1-249-363-11	CARBON MELF 220K 5% 1/8W	
R44	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R45	1-249-338-11	CARBON MELF 1.8K 5% 1/8W	
R46	1-249-344-11	CARBON MELF 5.6K 5% 1/8W	
R47	⚠ 1-249-409-11	CARBON (SMALL) 220 5% 1/4W	F
R48	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R49	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R61	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R62	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R64	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R65	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R66	1-215-493-00	CARBON MELF 1M 5% 1/5W	
R67	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R68	1-249-352-11	CARBON MELF 27K 5% 1/8W	
R69	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R70	1-249-331-11	CARBON MELF 470 5% 1/8W	
R71	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R72	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R73	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R74	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R75	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R81	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R82	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R83	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R84	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R85	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R86	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R87	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R88	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R89	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R90	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R91	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R92	⚠ 1-249-401-11	CARBON (SMALL) 47 5% 1/4W	F
R101	1-249-341-11	CARBON MELF 3.3K 5% 1/8W	
R102	1-249-332-11	CARBON MELF 560 5% 1/8W	
R103	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R104	1-249-328-11	CARBON MELF 270 5% 1/8W	
R105	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R106	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R107	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R108	1-249-323-11	CARBON MELF 100 5% 1/8W	
R109	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R110	⚠ 1-249-405-11	CARBON (SMALL) 100 5% 1/4W	F
R111	1-249-341-11	CARBON MELF 3.3K 5% 1/8W	
R112	1-249-332-11	CARBON MELF 560 5% 1/8W	
R113	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R114	1-249-328-11	CARBON MELF 270 5% 1/8W	
R115	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R116	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R117	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R118	1-249-323-11	CARBON MELF 100 5% 1/8W	

(VARIABLE RESISTOR)

Ref. No.	Part No.	Description	Remarks
RV21	1-238-598-11	RES, ADJ, CARBON 2.2K	(AEP, UK)
RV21	1-238-599-11	RES, ADJ, CARBON 4.7K	(G, IT)
RV22	1-238-601-11	RES, ADJ, CARBON 22K	
RV24	1-238-601-11	RES, ADJ, CARBON 22K	(AEP, UK)
RV24	1-238-602-11	RES, ADJ, CARBON 47K	(G, IT)

(TRANSFORMER)

Ref. No.	Part No.	Description	Remarks
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR	
T23	1-236-465-11	ENCAPSULATED COMPONENT	(G, IT)

(TERMINAL)

Ref. No.	Part No.	Description	Remarks
TM1	* 1-537-138-31	TERMINAL BOARD (ANTENNA)	

(CONNECTOR PIN)

Ref. No.	Part No.	Description	Remarks
TP1	* 1-560-060-00	PIN, CONNECTOR 2P	

(CRYSTAL VIBRATOR)

Ref. No.	Part No.	Description	Remarks
XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)	

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1-638-340-11 CONNECTOR BOARD (H3600)
1-638-336-11 CONNECTOR BOARD (H6600)
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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CONNECTOR DISPLAY

Ref. No.	Part No.	Description	Remarks
	* A-4341-562-A	DISPLAY BOARD, COMPLETE (H3600: AEP, UK)	
	* A-4341-563-A	DISPLAY BOARD, COMPLETE (H3600: G, IT)	
	* A-4341-554-A	DISPLAY BOARD, COMPLETE (H6600: AEP, UK)	
	* A-4341-556-A	DISPLAY BOARD, COMPLETE (H6600: G, IT)	
		**	
	* 4-932-810-11	CUSHION (FL)	
		(CAPACITOR)	
C601	1-124-471-00	ELECT 1000uF 20% 6.3V	
C701	1-126-177-11	ELECT 100uF 20% 10V	
C702	1-164-159-11	CERAMIC 0.1uF 50V	
C703	1-164-159-11	CERAMIC 0.1uF 50V	
C704	1-124-463-00	ELECT 0.1uF 20% 50V	
C705	1-161-494-00	CERAMIC 0.022uF 25V	
C706	1-162-203-31	CERAMIC 15PF 5% 50V	
C707	1-162-203-31	CERAMIC 15PF 5% 50V	
C710	1-164-159-11	CERAMIC 0.1uF 50V	
C711	1-126-157-11	ELECT 10uF 20% 16V	
C712	1-125-624-11	DUBLE LAYERS 0.22F 5.5V	
C713	1-136-173-00	FILM 0.47uF 5% 50V	
C714	1-136-173-00	FILM 0.47uF 5% 50V	
C715	1-136-173-00	FILM 0.47uF 5% 50V	
		(CERAMIC VIBRATOR)	
CF701	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	
		(CONNECTOR)	
CNJ601	* 1-566-859-11	SOCKET, CONNECTOR 15P	
CNJ602	* 1-564-341-11	PIN, CONNECTOR 7P	
CNJ603	* 1-564-337-00	PIN, CONNECTOR 3P	
CNJ604	* 1-565-561-11	PIN, CONNECTOR 3P	
CNJ701	* 1-564-342-11	PIN, CONNECTOR 8P	
CNJ702	* 1-564-339-00	PIN, CONNECTOR 5P	
		(DIODE)	
D701	8-719-912-20	DIODE 1SS120	
D702	8-719-912-20	DIODE 1SS120	
D707	8-719-912-20	DIODE 1SS120	
D710	8-719-301-39	DIODE SEL2210S-D (PRESET)	
D711	8-719-301-39	DIODE SEL2210S-D (TUNING)	
D712	8-719-912-20	DIODE 1SS120	
D714	8-719-912-20	DIODE 1SS120	
D715	8-719-010-28	DIODE UZ-4.3BSA	
D716	8-719-912-20	DIODE 1SS120	
D717	8-719-912-20	DIODE 1SS120	
D718	8-719-912-20	DIODE 1SS120	

Ref. No.	Part No.	Description	Remarks
		(INDICATOR)	
FLT701 ⚠	1-519-651-11	INDICATOR TUBE, FLUORESCENT	
		(IC)	
IC701	8-759-246-31	IC TMP87CK70F-6001	
IC702	8-759-500-31	IC X24C01P (H3600)	
IC702	8-759-504-12	IC X24C01S (H6600)	
IC703	8-749-920-83	IC GP1U52XB (H3600)	
IC703	8-741-100-63	IC SBX1619-51 (H6600)	
		(COIL)	
L701	1-410-521-11	INDUCTOR 100uH	
L702	1-410-521-11	INDUCTOR 100uH	
		(TRANSISTOR)	
Q701	8-729-900-80	TRANSISTOR DTC114ES	
Q702	8-729-900-80	TRANSISTOR DTC114ES	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q705	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q706	8-729-900-80	TRANSISTOR DTC114ES	
Q707	8-729-620-05	TRANSISTOR 2SC2603-EF	
		(RESISTOR)	
R601	1-249-393-11	CARBON 10 5% 1/4W	
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R702	1-249-417-11	CARBON 1K 5% 1/4W	
R703	1-249-417-11	CARBON 1K 5% 1/4W	
R704	1-249-417-11	CARBON 1K 5% 1/4W	
R705	1-249-417-11	CARBON 1K 5% 1/4W	
R706	1-249-423-11	CARBON 3.3K 5% 1/4W	
R707	1-249-423-11	CARBON 3.3K 5% 1/4W	
R708	1-249-421-11	CARBON 2.2K 5% 1/4W	
R709	1-249-423-11	CARBON 3.3K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R712	1-249-411-11	CARBON 330 5% 1/4W	
R713	1-247-887-00	CARBON 220K 5% 1/4W	
R714	1-249-429-11	CARBON 10K 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-429-11	CARBON 10K 5% 1/4W	
R717	1-249-425-11	CARBON 4.7K 5% 1/4W	
R718	1-249-429-11	CARBON 10K 5% 1/4W	
R719	1-249-429-11	CARBON 10K 5% 1/4W	
R720	1-249-429-11	CARBON 10K 5% 1/4W	
R721	1-249-429-11	CARBON 10K 5% 1/4W	
R722	1-249-429-11	CARBON 10K 5% 1/4W	
R723	1-249-423-11	CARBON 3.3K 5% 1/4W	
R724	1-249-429-11	CARBON 10K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CONNECTOR DISPLAY

Ref. No.	Part No.	Description				Remarks
R725	1-249-417-11	CARBON	1K	5%	1/4W	
R726	1-249-417-11	CARBON	1K	5%	1/4W	
R727	1-249-417-11	CARBON	1K	5%	1/4W	
R728	1-249-417-11	CARBON	1K	5%	1/4W	
R729	1-249-417-11	CARBON	1K	5%	1/4W	
R730	1-249-417-11	CARBON	1K	5%	1/4W	
R731	1-249-429-11	CARBON	10K	5%	1/4W	
R732	1-249-429-11	CARBON	10K	5%	1/4W	
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-417-11	CARBON	1K	5%	1/4W	
R736	1-249-429-11	CARBON	10K	5%	1/4W	
R737	1-249-409-11	CARBON	220	5%	1/4W	
R738	1-247-895-00	CARBON	470K	5%	1/4W	
		〈 SWITCH 〉				
S701	1-554-303-21	SWITCH, TACTILE (CLOCK)				
S702	1-554-303-21	SWITCH, TACTILE (TIMER CONTROL)				
S703	1-554-303-21	SWITCH, TACTILE (TIMER SET)				
S705	1-554-303-21	SWITCH, TACTILE (MEMORY NEXT)				
S706	1-554-303-21	SWITCH, TACTILE (MODE)				
S707	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)				
S708	1-554-303-21	SWITCH, TACTILE (BAND)				
S709	1-554-303-21	SWITCH, TACTILE (TUNING -)				
S710	1-554-303-21	SWITCH, TACTILE (TUNING +)				
		〈 CRYSTAL VIBRATOR 〉				
XT701	1-527-997-22	VIBRATOR, CRYSTAL (32kHz)				

English
91C[illegible]57-1
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9-956-240-21

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ST-H3600/H6600

SONY®

SERVICE MANUAL

4/18

AEP Model
UK Model

CORRECTION-1

Correct your service manual as shown below.

☛ : indicates corrected portion.

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
25	3	X-4941-544-1	PANEL ASSY, ASSY (H3600)	X-4941-544-1	PANEL ASSY, ASSY (H3600)
		X-4942-523-1	PANEL ASSY, ASSY (H6600)	X-4941-523-1	PANEL ASSY, ASSY (H6600)

9-956-240-81

Sony Corporation
Audio Group

English
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SS-H2600

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model

SPECIFICATIONS

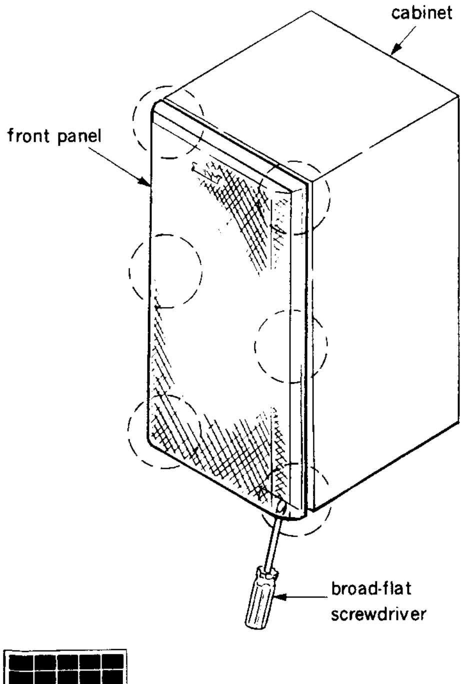
Speaker system	3-way
Speaker units	Woofer: 14cm($5^{1}/_{2}$in.)cone type Tweeter: 6cm($2^{3}/_{8}$in.)cone type Super Tweeter: 2cm($^{13}/_{16}$in.) dome type
Power handling capacity	Maximum input power 70W
Sensitivity	89dB/W/m
Effective frequency range	55-20,000 Hz
Rated impedance	6 ohms
Dimensions	Approx. 185x365x225mm(w/h/d) ($7^{3}/_{8}$ x $14^{3}/_{8}$ x $8^{7}/_{8}$ in.)
Weight	Approx. 4.5 kg per speaker (9 lb 15 oz)

Design and specifications subject to change without notice.

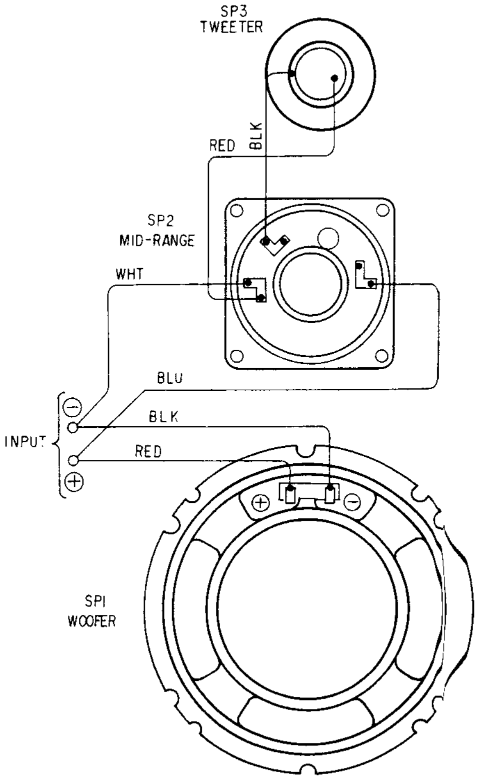
This set is the speaker system in MHC-2600.

1. FRONT PANEL REMOVAL

Note : Be careful not to scratch the cabinet.


cabinet
front panel
broad-flat screwdriver

2. WIRING DIAGRAM


SP3
TWEETER
RED
BLK
SP2
MID-RANGE
WHT
BLU
BLK
RED
INPUT
⊖
⊕
⊕
⊖
SPI
WOOFER

MICROFILM

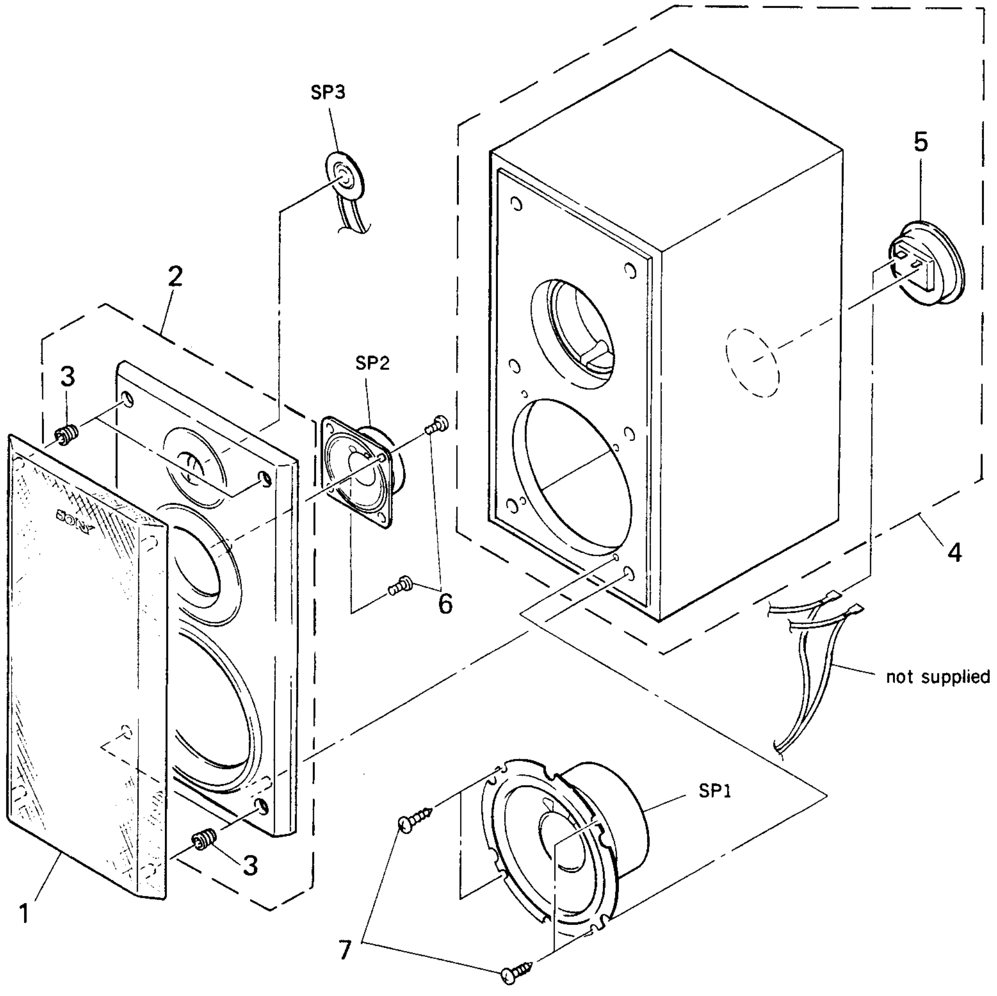
SPEAKER SYSTEM

SONY®

3. EXPLODED VIEW AND PARTS LIST

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color



Ref.No	Part No.	Description	Remarks
1	X-4941-328-1	FRAME ASSY, GRILLE	
2	X-4941-403-1	PANEL ASSY, FRONT	
3	*4-912-253-01	CATCHER	
4	X-4941-329-2	CABINET ASSY, SPEAKER (Canadian, AEP, E)	
4	X-4941-404-2	CABINET ASSY, SPEAKER (Germany)	
4	X-4941-438-2	CABINET ASSY, SPEAKER (US)	
5	1-537-145-11	TERMINAL BOARD (SPEAKER)	

Ref.No	Part No.	Description	Remarks
6	3-703-564-01	SCREW, TAPPING	
7	4-874-614-11	SCREW (4) (3.5×14), TAPPING	
SP1	1-544-277-11	SPEAKER (13CM) (EXCEPT FOR US)	
SP1	1-544-425-11	SPEAKER (13CM) (US)	
SP2	1-544-460-11	SPEAKER (6CM)	
SP3	1-544-293-11	SPEAKER (2CM)	

ACCESSORY & PACKING MATERIAL
****

Part No.	Description
1-575-495-11	CORD, SPEAKER (AEP, Germany)
3-753-187-11	MANUAL, INSTRUCTION (AEP, Germany)
*4-857-137-01	CUSHION
3-694-922-01	SHEET, PROTECTION

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